

# The Air Transport Fleet and RAF Lyneham

James Gray MP

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## 1. Introduction: Strategic Defence Review.

No military operation now or in the future will be possible without an efficient, cost-effective, and flexible RAF Air Transport Fleet for passengers, vehicles, weaponry, supplies and air-to-air refuelling. Yet, as I shall try to show in this paper, a number of decisions in recent years on these key capabilities have been wrong, internally inconsistent, driven by questionable costings and doubtful accountancy. Procurements – especially the A 400M - have been delayed and under-budgeted and the so-called Strategic Basing Study ill-advised and based on a series of false premises. It is therefore the main thesis of this paper that the whole question of the RAF Air Transport fleet and where it is based should form a central part of the Strategic Defence Review promised after the General Election, that all further piecemeal decision-making with regard to Air Transport should be halted pending the SDR, and that irrevocable actions, for example with regard to the further re-development of RAF Brize Norton, should be halted in the meantime.

## 2. Current Plans

A full analysis of the RAF's Air Transport Fleet and the current plans for it will be found as Appendix One. In summary, they are:-

- To phase out the remaining 16 C130Ks by 2012
- To move the 24 C130 Js to Brize Norton
- To buy a further C-17 taking the fleet to 7
- To buy 25 A 400 M airframes from 2015 onwards
- To buy a total of 14 A 330 tankers
- To retire the remaining VC10s and Tristars
- To co-locate all of the above at RAF Brize Norton,
- To close RAF Lyneham in December 2012

Central to all of this are the notions that that a C130 J/ A 400 M mix together with A 300 tankers fits all known or foreseeable strategic and tactical requirements, that it is practical, that it can be achieved on a smaller footprint, that RAF Lyneham as a result could close producing sufficient annualised savings to pay for the entire Air Transport fleet being accommodated at a substantially upgraded RAF Brize Norton.. The SDR should re-examine each of these presumptions. This paper will try to provide signposts for it.

### 3. Strategic and Tactical Air Transport.

The first test-flight of the A 400M occurred recently, with a lead-time until production of at least 3 years. There remain very large question marks about its true in-service date, and how long it will take to deliver the 25 planes the UK has ordered, or indeed what their eventual price will be. There is an ever-widening gap between any possible extension of the life-expectancy of the C 130 K Fleet and its replacement by A 400M. That seems to have been partially acknowledged by the Government's recent announcement that they will buy a further C17, taking the fleet to a total of 7 aircraft.

Any further delay to the A 400 M could have a potentially catastrophic effect on the C-17 fleet. As the Chief of the Air Staff commented at a recent House of Commons briefing, "The C-17s are burning up their useful life at an alarming rate, and will not last their projected 25 year lifespan." The C130 J fleet is also taking a bit of a pounding in Afghanistan.

Quite aside from the delays and burgeoning costs of the A 400M, increasing numbers of informed commentators are also questioning whether or not it is anyhow ideal for our purposes. The A 400 M was specifically designed for the FRES project which seems likely to be largely cancelled, and it is too small to accommodate Mastiff, or, for example, partially dismantled Chinooks or Merlins. Its parachute insertion capability also seems uncertain.

For all of those reasons, many people in the RAF are increasingly arguing that rather than the A 400 M, they would much prefer a larger C 130 J fleet, coupled with perhaps two further C-17s. (Boeing are understood to be likely to close the C-17 production line by the end of 2011, at least partially dependent on the UK decision.) Such a fleet would deliver all known or likely future air cargo requirements, it would be more easily procured and maintained, and its cost would be known and discountable. As I understand it, it would still be possible to cancel the A 400 M in rather the same way as the Canadians did in 2006 when they were faced with a similar choice. The French and South Africans have also given up on the A 400 M in favour of C 130 Js. (Appendix Six)

### 4. Consequences of a Delayed/Cancelled A 400 M.

There would, of course, be industrial consequences from the cancellation of A 400 M. Our withdrawal from the project would also have unit cost implications for the partner nations. I understand that an initial high-level enquiry to the Germans about the possibility of our at least reducing the number of aircraft we buy were met with a pretty stony face. They are said to be currently touring the Middle East trying to find new partners for the project. The Prime Minister was told in no uncertain terms that we would be held to our contract to buy 25 aircraft, at a penalty of losing the right to manufacture the wings in Filton. Yet surely any such consequence should be secondary to the gap in our defence capabilities which the likely delay in its in-service date would imply. The SDR should be concerned first and foremost with our

strategic capabilities, and only secondarily (if at all) with the industrial consequences of the decisions which might be taken.

The cancellation or even severe delay of the A 400 M should also reopen the whole question of the cost effectiveness of closing RAF Lyneham and the strategic effectiveness of co-location at RAF Brize Norton known as Project Catara.

## 5. Project Catara.

Both Lyneham and Brize and their assets are at full stretch already. The co-location effort, especially if there is no change in the aircraft in the meantime, and the squeezing of a quart into the Brize pint pot would potentially have a major effect on air transport capability and the workability of the Afghan Air Bridge which is already under considerable strain. As an extremely senior RAF officer told me recently (strictly off the record, so I will name him neither now nor in the future):- “The move to Brize is to be completed with no reduction in operational tempo.....It will be a disaster which the RAF will regret, but its got to be made to happen.....I’m just glad that I’ll have left by then, so its [others] who will have to live with the mess.” Knowing of my natural constituency interest anyhow, he and a number of other extremely well-placed sources have sought to make me aware of the problems associated with Project Catara, whether or not the A 400 M goes ahead. After all, there are 750 civilian employees at RAF Lyneham, and of course many local businesses depend on it for their livelihood. Including the service people and their spouses, it is likely that something in the region of 10,000 people locally owe their livelihoods to the base, which, it is estimated makes a £10million contribution to the local economy.

## 6. Project Catara: Likely Consequences

### a. Eggs in One Basket

Project Catara neatly puts all of our “air transport eggs” in one basket. There are two runways at Lyneham, only one at Brize which is anyhow prone to flooding. Reducing our runway capacity from three to one, and concentrating all of our air transport capability on that one runway seems like a recipe for disaster. A recent incident (14 June 2009) in which the Vulcan was unable to land at Brize because of a VC10 with a burst tyre on the runway, or another recent occasion in which an emergency services helicopter was refused permission to land through lack of space may be a foretaste of what is to come. A single terrorist dirty bomb on the Brize runway would have the potential effect of crippling the entire British war effort for days or weeks. Is it not ironic that there is pressure for a third runway at Heathrow to accommodate extra movements at the same moment as the RAF Air Transport capability is being reduced from three runways to one? Dr Beeching would be envious.

If Lyneham closes, Brize Norton will be the only large transport-capable 24 hour fully manned military airfield in the UK. Lyneham, and Brize are the only remaining RAF airfields south of Lincoln that have a “crash” categorisation (ie number of fire trucks) that allow them to be used by large air transport aircraft as a “practice diversion” for training, or for real.

In other words, the relative closeness of Brize Norton and Lyneham is a major asset, since one can so easily be used as an emergency alternative to the other. In answer to a recent PQ on this subject, the Minister advised that in the event of the Brize Norton runway being incapacitated, they would use civilian airports! When I raised this with the Chief of the Air Staff recently, he responded that, amongst others we could use – bizarrely – Bournemouth, as a substitute. (Apparently ignoring the facts that Bournemouth Airport operates only from 0630 to 2130 daily, that its only runway is exactly aligned with that at Brize thereby making it subject to the same cross-winds, unlike the runways at Lyneham which are at right angles to it, and that the Bournemouth runway is some 500ft shorter than that at Lyneham) Would we really want to send military aircraft, potentially with sensitive or even dangerous loads, or even perhaps bearing military bodies to Bristol or Bournemouth civilian airports?

b. Over-cramming at Brize Norton.

Other facilities at Brize Norton, which is anyhow smaller than Lyneham would be badly over-stretched. There is simply insufficient room for the 6000 servicemen and their aircraft which will be based there. There will be pan space at Brize for 62 aircraft, the currently planned fleet being for 65. 2 or 3 Hercules squadrons will be squeezed into a building currently occupied by a single flight. The new C130J schoolhouse, together with that for A 400 M and C17, has room for only 10 car parking spaces amongst them. Little consideration seems to have been given to the location of training. Talk of Fairford seems premature while the Americans seem to want to keep it on 24/7 standby, and those who are suggesting Keevil are ignoring the huge investment which would be needed. The shortage of married quarters at Brize will either mean that for the foreseeable future, air crews and others will have to be ‘bussed’ from Lyneham to Brize on a daily basis with obvious cost and fatigue implications, or the tentative alternative proposal – namely of a block purchase of the married quarters at Faringdon – which would cost £200 million.

c. Inherent Advantages at Lyneham

Quite apart from its two runways, Lyneham has enormous ramp and hangar capacity as well as substantial accommodation for personnel, workshops, offices and so on. The C130K simulator (which would be needed if there is any delay to the decommissioning of the older Hercules) and that for the C 130 J which is widely regarded as state-of-the-art and which is to be rebuilt at Brize at a cost of £10million, are of course fully operational at Lyneham, alongside all of the space and facilities needed for training. 47 Air Despatch Regiment, which currently has its own site at Lyneham was not even considered until recently, and it appears will have to have a new hangar built for it at Brize. The strongly supportive local community is evidenced not least by the superb way in which the people of Wootton Bassett line their high street week in week out for Repatriations. They are not noise not pollution averse, as the people of Carterton might well be as a result of the significant increase in aircraft movements which Catara implies.

d. Air Traffic Control Implications

Lyneham and Brize have worked successfully in tandem for many years, air traffic control staff at the two having a close understanding of the other's needs and the ability to handle the other's aircraft. Brize has an elevation of 287ft AMSL, Lyneham being 513ft AMSL, which means that their weather patterns are often very different, which allows diversions from one to the other. Pilots tend to use Lyneham/Brize as alternative "crash" airfields, thereby having to carry less fuel than they would do if they were to use their alternative provision which is currently at Manchester. As a recently retired RAF air traffic controller comments:-"It is certain that the increase of aircraft numbers at Brize Norton will make the air traffic control environment a lot more difficult to handle, especially without the safety valve of Lyneham." A recent PQ about airspace issues relating to Project Catara revealed that such issues had only been considered as part of the original Strategic Basing Review, and that "consideration of airspace issues relating to the expansion of RAF Brize Norton's Role remain ongoing...." (PQ dated 14/12/2009, Appendix Two) Is it not astonishing that all of this money is being spent, and our capabilities constrained in the way described, yet potential airspace problems are only now being considered?

e. Ground handling at Brize.

The concentration of aircraft at Brize brings further problems. As the aerial photographs in the Appendix Three will show, the problem lies in the lack of a taxiway parallel to the runway on the northern side of the airfield and there being no space to add one. There is a complete taxiway on the south side of the runway, but it is not much use because (a) its western half is unavailable to aircraft with a wingspan of greater than 60 feet and (b) the terminal and Operations are all on the north side. This may be just about sustainable with low traffic volumes, but simply won't work if volumes increase. You need to be able to run a one-way system (as they do, for example, at Heathrow), but for that you need taxiways at both sides of the runway, and preferably turn-offs in the middle of it. Without this, precious time and fuel are wasted, traffic capacity avoidably restricted, and safety margins reduced. Pilots advise that runway waiting times at Brize Norton are already very large, (eg 30 minutes to cross the runway with one VC10 in the circuit.) The retired Air Traffic Controller concludes:-“It is a reasonable conclusion that in view of the unfavourable layout of the airfield and increasing numbers of aircraft at Brize, serious consideration should be given to whether the inevitably increased risk of an accident is sustainable.?” It would be useful to have sight of the RAF study of all of this.

The recent Haddon Cave Report into the Nimrods and the report on the Sea-King mid-air collision should give us pause for thought about potential financial savings over safety.

All of these inherent problems with Project Catara could no doubt be overcome if sufficient money was to be spent on the project, to do which there would have to be significant savings from the closure of RAF Lyneham. The probable arithmetic behind the project should also be carefully re-examined in the SDR.

7. Cost/savings Implications.

- a. The financial arithmetic behind Project Catara needs some very careful analysis. The original Strategic Basing Study foresaw the closure of only one RAF station out of St Mawgan, Lyneham and Brize. It is unclear why that was changed. A simplistic extrapolation of cost savings from the closure of St Mawgan would be wholly misleading.
- b. Costs:- It seems to have been argued that it is obvious that the cost of Catara would very quickly be amortized by annual cost savings. The original budget for the move which was £360 million, has been slashed to help pay for Op Herrick to a reported total budget of £180million. (How a budget for a project of this kind could itself be cut in half without unreasonable corner-cutting, or presumably substantial delay must of itself be questionable.) It is reliably reported to me that much

of the cost of the infrastructure improvements needed at Brize have been subsumed within the costs of the A 400 M project and therefore do not appear under the Project Catara costs. That alone must be pretty questionable accounting, especially given the question marks over the A 400M. All of the infrastructure costs at Brize should be made fully transparent irrespective of the future of the A 400M project.

- c. Savings:- The projected annual savings from closing Lyneham are said to be £6million pa (out of a £44 million budget, most of which, of course would still be needed after the move to Brize), so even with the slashed budget, payback by 2025 looks hugely optimistic. 2050 may be closer to the mark, although even that doubtful. There is some pretty loose talk around the RAF of savings of £434 million accruing from the closure, but it is very hard to see how, and I understand that that projected saving has already been “spent” elsewhere in the RAF budgets anyhow. What is more, all previous experience demonstrates that such figures are very likely to be significantly less favourable in the event than might at first be posited on paper.
- d. Capital Value of Lyneham:- Nor will the MOD recoup the costs by a substantial capital income from the sale of a vacated Lyneham. I have established via a PQ that the Crichel Down rules apply, and understand that the cost of clearing and decontaminating the site would be substantial. For example, for the RAF to ‘give’ RAF Abingdon to the army in the 1990s cost £80million. I have been told that the RAF are using entirely fictitious figures of a sale value of £10 million, and decontamination costs of the same. If so, the entire basis of their calculations is fundamentally flawed, as was nearly admitted in a recent PQ. (Appendix Four) The Minister admitted that “Until a Land Quality Assessment has been completed, it is not possible to give an estimate of the costs relating to land contamination. We currently estimate that an initial Land Quality Assessment of the site will be undertaken in Financial Year 2010-2011” In other words, they have no idea at all of the degree of contamination of the site, and therefore will have been unable to factor in any residual value into their calculations of the cost/benefits of project Catara.. It is much more likely that the sale value would be close to nil, (about which again the Minister admits that he has no clue whatsoever),decontamination costs of other order of £100 million. Development would not be allowed under current and foreseeable planning restrictions. All of that means that a vacated Lyneham site would be very unlikely to be a saleable asset. Indeed it might well become an expensive white elephant because of its extensive contamination .
- e. I would simply argue that the figures used for costs, annualised savings and capital revenue should be very carefully re-examined by accountants whose brief is to save on the overall defence budget rather than to pander to an RAF pet project by trying to justify it financially. After all, if Project Catara were to be halted mid-track, it would immediately save presumably tens of millions of pounds worth of

further development costs, always assuming that the project could be put on hold or cancelled in reasonably good time.

- f. After all, when a similar project was considered under the code name Project Belvedere to consider co-locating the RAF and Army helicopter assets on one base, it was concluded that the capital costs of upgrading the destination air base would far outweigh the annual savings which would be achieved by it. (Although I hear a whisper that because of the announcement about the extra Chinooks, Project Belvedere may now be revisited.)

## 8. Conclusions.

There are, then, significant strategic, tactical and practical difficulties in the way of project Catara, and the cost/benefit analysis and accounting justifications for it are, to say the least, questionable. It seems only sensible to recommend that all of these decisions, including the closure of RAF Lyneham, should be put on hold pending the outcome of the Strategic Defence Review. For example, a recent PQ (Appendix Five) reveals that the contract for the C130J Training and Mission Rehearsal facility (ie the simulator) at RAF Brize Norton “will be awarded early in 2010.” This is a major £10 million contract, and should be put on hold until the wider implications of the move have been duly considered.

The RAF will always do whatever it is asked to do with whatever it is given to do it. However in the case of transport operations, this seems set to involve virtuoso plate-spinning. Under such circumstances the plan to consolidate the entire fleet at Brize Norton looks to be completely unworkable, and should urgently be re-assessed before any more money is wasted, operations further exposed and slots for new aircraft lost.

# Appendices

## RAF Air Transport Fleet

### C17

6 in service, one more purchase announced

### VC10

15 in service. Were all due to be withdrawn by end 2011, but may need extending to 2016. Very old airframes (c 40 years), so extending life may prove very tricky, expensive, and perhaps even impossible.

### C130K

16 currently in service and being phased out at rate of 2 or 3 per annum for an out-of-service date for majority by 2012 prior to the move to Brize Norton. All around 40 years old, 3 versions still in use, a number being configured as tankers. Life may have to be extended depending on delays to A 400M

### C130J

24 in service, none on order, and no available manufacturing slots before 2012.

### Tristar

9 in service, 2 configured as tankers, 4 as tanker-freighters and 3 passenger only. Due out of service by 2016. Mainly 35 year old airframes converted from L1011-1s

### A330

14 to be acquired, starting late 2011. All to be leased, with 9 permanently on RAF strength, and the other 5 to remain with civil operators and called back into RAF service as and when required.

### A400M

25 on order for a currently-planned in-service date of 2014, which no longer looks remotely credible. Even then, new aircraft will only trickle through because of production commitments elsewhere. Extremely unclear when all 25 will be in service, but may not be until 2020.

Ministry of Defence

Monday 14 December 2009

James Gray MP (North Wiltshire) (Con)

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WRITTEN

To ask the Secretary of State for Defence, whether an Airspace Study has been completed in connection with Project Cotarga. (307118)

Bill Rammell MP

The airspace issues relating to Project CATARA were considered as part of The Strategic Review of RAF Brize Norton, RAF Lyneham and RAF St Mawgan, the primary outcome of which was a decision to collocate air transport assets at RAF Brize Norton. It was considered that airspace implications did not preclude such a move.

However, consideration of potential airspace issues relating to the expansion of RAF Brize Norton's role remains on going.

First, Brize Norton:



Next, Lyneham:



**Ministry of Defence**

**Monday 14 December 2009**

**James Gray MP (North Wiltshire) (Con)**

415

WRITTEN

To ask the Secretary of State for Defence, what estimate he has made of the cost of decontamination at a vacated RAF Lyneham were the site to be sold for (a) commercial development, (b) agricultural purposes and (c) continuing military use. (307119)

**Bill Rammell MP**

It is the Department's policy to undertake a Land Quality Assessment (LQA) in advance of disposal of any site. Until an LQA to support disposal has been completed it is not possible to give an estimate of costs relating to land contamination. We currently anticipate that an initial LQA of the site will be undertaken in Financial Year 2010-11.

If no further defence or wider government use can be found for RAF Lyneham, the site will be handed over to Defence Estates late 2012 for disposal on the open market or to former owners. However, it is too early to speculate at this stage what alternative non-military uses of the site might be.

## SAAF and the A400M

### **A400M FIRST FLIGHT ONLY NEXT YEAR**

Article published with consent from DefenceWeb

France's Le Figaro daily says the Airbus A400M is no longer likely to make its maiden flight this year.

Instead, it is expected to take to the air early next year, according to a "confidential document" reportedly sent to OCCAR (the European organisation for joint armament cooperation) by Airbus parent EADS.

The Le Figaro report comes after the French Senate published a report on the project in which South Africa is a risk-sharing partner (available, in French, at [The Senate report](#), the only extensive public audit of the program to date, spreads blame for the four year delay in the fielding of the transport widely, blaming Airbus, OCCAR as well as European governments.

The report also confirms media reports that the aircraft is 12 metric tons overweight. EADS told the Senate the payload will remain 37mt, which will necessarily result in a heavier aircraft with a lower top speed, shorter unrefueled range and a maximum landing weight of 134mt rather than the previously projected 122mt.

Senators from the foreign and finance committee also found that the A400M's unit price has increased from ~~€~~ <sup>Euros ?</sup> 110 million in 1998 to 145 million today.

The report says problems with the platform can be blamed on inexperience with military contracts at Airbus, excessive optimism by subcontractors, ineffective programme management and the different and conflicting agenda pursued by partner governments.

#### Ambition

Defence-Aerospace.com adds the report also identifies the combined development and production contract, first signed in 2001 and then amended in 2003, as "a recipe for failure" because it called for concurrent development of a new airframe, a new engine and new avionics. It also underestimated price and timescale and further lacked a risk reduction study.

Together, these factors introduced unsustainable levels of risk, while contractual milestones were too tight and made no allowance for development delays.

EADS and Airbus also seriously underestimated the mass, the airframe stress factors and the complexity of mission systems for a tactical transport aircraft. Also, at the time Airbus was mainly focused on the A380 and on management in-fighting, while the program management structure was compromised by crossed lines of command and of responsibility, the Senators added.

#### Litany of woe

The Senators further found that problems with the aircraft are more extensive than the oft-reported crisis surrounding the Hispano-Suiza-developed Full Authority Digital Engine Controls (FADEC) software.

Delays in the navigation architecture are a worry equal to concerns about power plant. The Flight Management System (FMS), the GPS Air Data Inertial Reference System (GADIRS), the Terrain-Reference Navigation System (TRN) and the Terrain Masking Low Level Flight system (TM-LLF) have all experienced major development delay.

The report adds delivery of the FADEC software is now tentatively scheduled for October, assuming it obtains its civil certification in July. This is two years later than the contractual date of 30 October 2007, and pushes delivery of the first A400M back to late 2012.

Other concerns raised in the report are:

- Only two aircraft are likely to have been delivered by 2013. Delivery rates will only ramp up in 2014 and the backlog will

not be fully worked away until 2020.

Airbus has offered to deliver an interim airplane, but this will not be capable of the more sophisticated tactical flight modes until navigation systems issues have been resolved. Delivered aircraft will then have to be retrofitted to the full contractual standard.

The report notes partner governments have to date paid €5 billion into the program. They declined, however, to pay an extra €500 million for risk the reduction studies requested by industry. Airbus avers this led to development problems regarding the horizontal tail surface, the definition of the wing design and weight estimates.

The Senators say European countries, at least, will be able to cancel its orders from April, should they chose to do so as the delay in achieving first flight will then exceed a contractual 14 month cap.

"The contract foresees that if first flight is delayed by more than 14 months, governments can abandon the program and recover funds they have paid," the report says. "As first flight was initially scheduled for January 2008, this means that [cancellation] will become legally feasible by the early Spring 2009....in these conditions, the program's future will be settled by April", defence-aerospace translates the document as saying.

"The fact that cancellation is a real option, even if an unlikely one, is significant because it provides governments with a powerful bargaining weapon as EADS and Airbus press for renegotiation to escape heavy financial penalties," the online publication adds.

EADS and Airbus are trying to convince governments to amend technical specifications they now see as unrealistic, to reduce especially harsh penalty clauses, and to amend unfavorable price escalation clauses. "It is probable that, in the short and medium terms, the [current contract] will produce large losses" for industry, the report states.

France is reportedly not opposed to renegotiation, but Germany wants the contract to be completed as signed, while British Defense Secretary John Hutton has explicitly threatened to pull out as a delay of three to four years for initial deliveries is "unacceptable."

Other partner governments have not publicly stated their position. The Senate report cautions that "the rigid enforcement of the contract would 'fragilise' EADS," the corporate parent of Airbus.

Airbus has said it is not seeking extra cash and that the contract changes it seeks would not cost European taxpayers extra money. Chief Operating Officer Fabrice Brégier earlier this month told the French daily Les Echos that Airbus is "not asking for penalties to be lifted, but to be spread out over a new timetable that is both credible and binding."

The manufacturer's position is that, since the responsibility for the delays is shared by governments and by subcontractors, it should not be alone in suffering the financial consequences.

The Senatorial report recommends that the €20 billion contract should be renegotiated to avoid "even more negative operational and industrial consequences" including US domination of the air lifter market.

South African companies involved in the A400M project are risk-sharing partners Denel Saab Aerostructures and Aerosud as well as Saab South Africa and Omnipless.