



Australian Government
Civil Aviation Safety Authority

OFFICE OF THE CHIEF EXECUTIVE OFFICER

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2 November 2004

The Hon John Anderson MP
Deputy Prime Minister
Minister for Transport and Regional Services
Parliament House
CANBERRA ACT 2601

Dear Minister

I refer to your letter dated 18 October 2004 seeking my view on a number of matters relating to the proposed Option 3 changes to stage 2b of the National Airspace System (NAS).

The matters about which you have sought my views, and indeed many aspects of Stage 2b of the NAS have, unlike any other aspect of aviation, polarised various sectors of the industry to a point where I believe most views are based on subjective assessments, emotive reaction to isolated components of the system or self-interest. Since assuming my role in December 2003, I have repeatedly made the point that where CASA is asked to provide assessments of issues relating to the NAS, I will require those assessments to be made independently and objectively in accordance with Section 9 (1) (g) of the *Civil Aviation Act 1988* that gives CASA the function of conducting 'reviews of the system of civil aviation safety'. My responses detailed below satisfy that requirement.

In preparing my response to your request, I have again obtained the views of technical experts within the Civil Aviation Safety Authority's (CASA's) Head Office who have been involved in NAS initiatives from CASA's perspective, and again utilised a CASA officer not previously involved with NAS to obtain a cross section of industry views in relation to some of the queries raised in your letter. This latter activity involved an intensive ring-around of airlines, charter operators, aerial work operators, flying schools and individual instructors.

I have also sought the specific views of the Chief Executive Officers of Australia's high capacity and large regional airlines who, under the provisions of Section 28 BE of the *Civil Aviation Act 1988*, must ensure their operations are 'done with a

reasonable degree of care and diligence'. In considering the responses to your questions, particularly when conflicting opinions are forthcoming from various individuals, the safety-related views of those ultimately responsible for the safety of over 94% of people in the air on any given day must be considered.

In addition, Mr Tony Broderick, who on 18 October 2004 provided advice to Mr Dick Smith in relation to the NAS 2b decision taken by Airservices Australia (AA), was contacted by CASA and provided additional views. I have attempted, unsuccessfully, to contact a Mr Francis who I understand has provided an opinion to Mr Mike Smith regarding the AA decision. I have reviewed the advice provided to you by Mr Mike Smith that appears to be based on Mr Francis's views.

Your letter states that advice available to you on 31 August indicated that there was close to an intolerable risk associated with reverting to C class airspace in the non-radar environment. CASA was aware of this advice and in a letter to AA CEO Mr Bernie Smith on 26 August that covered the report of Professor O'Neill I offered the following observation:

'Even after making the proposed changes, the consequent level of risk in the defined portions of airspace remain quite close to the maximum tolerable risk acceptable to Airservices under your own methodology. This result is surprising.'

As a result of CASA's reaction to this assessment and possibly other input, AA conducted a safety analysis to assess the relative risk of Class C that will be introduced on 25 November 2004. The results of this analysis have been provided to CASA in response to queries from CASA's Chief Operating Officer that were generated as a result of your letter of 18 October. On 26 October, AA advised CASA that:

'The comparative risk analysis of implementing Class C with existing radar coverage (Option 3) will produce an average reduction in risk of a statistical fatality of 86.3% over the three locations analysed. Using the existing Class E as a baseline compared to introduction of full radar the expected reduction in a statistical fatality is an average of 86.6%. The comparative risk reduction between Option 3 (Class C with existing radar) and Class C with full radar coverage is minor particularly when compared to the risk reductions afforded by reclassifying the existing Class E to Class C and retaining current radar coverage.'

With the need to respond urgently to your letter of 18 October, CASA has not had the opportunity to subject the AA safety analysis to detailed scrutiny, however given CASA's 'surprise' at the initial results provided by AA in August these revised risk assessments are logical.

The points of view provided by independent experts engaged by various individuals interested in this matter have, where possible, been carefully evaluated by CASA. Of particular note is a focus within these views only on the structure of the airspace before and after the planned changes on 25 November. Consistent in these views is a failure to address matters related to the change process itself, the single most

significant factor repeatedly identified by CASA as the one, if not managed adequately, will present the greatest risks.

The independent views also now raise serious questions about the ability of experts in other aviation environments to use their experiences as the only means of evaluating changes to the Australian airspace system. In response to direct queries from CASA, Mr Tony Broderick stated that he 'cannot understand how Class C airspace without radar can work safety'. Whilst this is clearly a point of view provided in good faith based on his North American experience, the fact remains that non-radar Class C airspace has operated since the mid-1990's and non-radar controlled airspace has operated in Australian airspace for decades.

My firm view is that in implementing the current and future changes to Australian airspace international experts will remain a valuable resource, but their views will need to be evaluated against the very clear differences that exist in this country compared to North America. These differences include a significantly lower traffic density in many locations, significantly different aviation infrastructure including radar, a totally different costing regime and an operating culture based on decades of different procedures. These differences must be addressed as part of future changes to the airspace system and I believe the best way is to initiate a consultation process involving all participants, such as the 'airspace summit' we have discussed.

In response to your specific questions, I advise the following:

a) In relation to the 10 so called 'D towers' is there a safety differential between C class airspace with radar and C class airspace without radar.

Yes, there is a positive safety differential in controlled airspace with radar as distinct from without radar. However, it is clear that this would be true for any classification of airspace, C or otherwise, in which radar was used to mitigate risk. However, as stated above, the level of risk in Australian non-radar Class C terminal airspace has been assessed as marginally higher than Class C with radar. This would seem to be an area where the traffic densities experienced in Australian airspace provide a different result than North America

Additionally, there has been no evidence provided to CASA to support the claim that procedural non-radar Class C airspace in Australia is unsafe, and certainly not '...close to intolerable risk' as you were previously advised. In fact, airspace risk modelling undertaken by CASA some years ago demonstrated that the risk in non-radar Class C airspace in terminal areas was acceptable. Clearly, the inclusion of radar in Class C airspace in Australia, where it is not presently available, would further lower risk from an already acceptable level. However, its implementation should be justified on cost/benefit grounds.

b) If such a differential exists do you believe it would be advisable to make a regulation under the Civil Aviation Act prescribing class C as exclusively radar airspace?

On the strength of the information provided to me, it is my view that it would not be warranted to prescribe Class C airspace as exclusively radar airspace. It should be noted that ICAO does not require that radar services be mandated in Class C airspace. This is clearly an issue that must take account of Australia's unique aviation environment.

c) Do you believe that AA's proposal to 'roll-back' stage 2b of NAS is, and will be, undertaken in a way that ensures the safety of the travelling public.

This issue was again raised as part of the industry consultation process undertaken in the formulation of this response. The unanimous view of the CEO's responsible for high capacity and large regional airline operations is that the change process is being adequately managed. During telephone polling of smaller operators, flying schools and flying instructors, there were no significant concerns raised regarding the change process. Of interest, an almost unanimous view from both the airline sector and general aviation was support for the new charts depicting frequency boundaries. In previous correspondence with AA I have highlighted the need for vigilance in respect of 'change fatigue' where some small or private operators may not plan for revised procedures. I am now aware that AA has planned for this eventuality and will have measures in place to mitigate this risk. Despite this high level of planning, I will again formally raise the potential of this issue with Mr Bernie Smith.

As advised in my letter of 13 October 2004, I am of the view that the training and education material prepared by AA is adequate and sufficient to support the Option 3 changes to Stage 2b. This is also the clear majority view of the industry organisations and individuals surveyed by me in the last few days.

In relation to the timing of the education process I am also satisfied that the AA activity to date, as well as planned activity, will be sufficient to support the proposed changes in a manner which will ensure the safety of the travelling public. As advised previously, CASA intends to monitor the implementation process conducted by AA.

d) Do you believe that the concerns you have raised about Option 3 in your previous letters pose safety risks that are of lesser magnitude than those inherent in maintaining the present airspace arrangements?

The majority of concerns that I have raised previously relate to adequate management of the change process. As stated above, I have residual concerns about the potential for change at the small operator/private pilot level of the industry but these are progressively being mitigated by the training and education (T&E) process. A clear benefit during this change process is the significantly longer period for a phased rollout of the T&E material compared with the changes implemented in November 2003.

Of much greater concern to me at this stage in the change process would be the totally unacceptable risks presented by any attempt to halt the current changes planned for 25 November. Regardless of the perceived relative benefits of various airspace models pre or post 25 November, now that the industry has received detailed training and education material, and initiated the education process of both pilots and air traffic controllers, terminating the planned changes is not an option on the pure basis of increased risk to the safety of operations.

e) Do you believe that the concerns raised by Professor O'Neill and other independent experts about the AA safety case methodology have been fully considered by each of the parties and dealt with adequately to enable me to have the confidence that the same methodology, which has been used by Airservices to determine the risks associated with the implementation of the proposed changes to be introduced on 25 November 2004, is sound.

Professor O'Neill and other independent experts have only commented on the risk modelling undertaken by AA that was used in their safety assessment. This assessment primarily addressed matters leading to a decision on airspace classification or structure. AA has advised CASA that both AA management and the Board reviewed all material including that conducted by Professor O'Neill and provided by CASA. Risk modelling is only one component of a safety case and there are a number of methodologies that can be employed to model risk.

In relation to risks associated with implementing the structure decided by the AA Board, CASA has previously evaluated the Option 3 safety assessment report in its totality and has advised AA of any outstanding concerns, as well as providing advice regarding the implementation process. Based on the material presented to CASA, including the risk mitigation strategies proposed, I have no safety-related basis to object to the planned changes being implemented on 25 November 2004.

As mentioned above, now that the change process is well underway, any attempt to halt the planned changes would result in widespread confusion that would present unacceptable risks to the travelling public.

I would be happy to discuss my views with you further.

Yours sincerely



Bruce Byron AM
Chief Executive Officer