

**NATMAC Representatives**

DAP/STNTMZ

23 July 2009

**NATMAC INFORMATIVE**

Dear Colleagues

**INTRODUCTION OF STANSTED TRANSPONDER MANDATORY ZONE (TMZ)**

**INTRODUCTION**

- 1.1 NATS issued a consultation document in January 2009 seeking comments on a proposal to introduce a TMZ in the vicinity of Stansted International Airport. Upon receipt of the proposal, my staff undertook a detailed analysis of the material, which included an examination of the operational requirements and the consultation process. The purpose of this letter is to provide you with an overview of the proposal and my subsequent decision on it.

**PROPOSAL OVERVIEW**

- 2.1 It is widely accepted at all levels of the aviation community that despite a broad range of national and local initiatives infringements of controlled airspace (CAS) continue to present a significant risk to flight safety in the UK. It is equally widely recognised that CAS in the region of Stansted attracts a high rate of infringements.
- 2.2 Infringing aircraft that are not transponding or do not display height information are a more serious risk to safety than those aircraft with fully operational transponders. Aircraft operating in the area around Stansted can only be detected by NATS' infringement detection systems if they are displaying height information. NATS have therefore proposed the establishment of a TMZ at Stansted in order to create a more informed air traffic environment and thus enhance flight safety. A map of the Stansted TMZ proposal at Enclosure 1.
- 2.3 In examining the design options, the sponsor considered that the 'do nothing' option should be rejected as this principally relied on improvements in pilot navigation or a general voluntary increase in transponder usage – both of which, despite various education and publicity programmes over a number of years, were not considered as providing an adequate or imminent solution.

- 2.4 The design option identified in the Consultation Document proposed the establishment of a TMZ in all Class G (uncontrolled) airspace under the Stansted CTA, as depicted on the map at Enclosure 2. This option would provide the maximum protection from infringements and thus the greatest reduction in risk. However, considering the degree of air traffic control services required, and the concerns by some consultees regarding the impact of the TMZ on local General Aviation (GA) airfields and private landing strips this option was also rejected.
- 2.5 The sponsor concluded that the only practical and justifiable option was the establishment of TMZs in the Class G airspace under the Stansted CTA to the northeast and southwest of the Stansted Control Zone. This option provides a lesser degree of protection from infringements and consequently a smaller risk reduction than the original Consultation Document proposal, but gives priority to the airspace presenting the highest risk. NATS also propose that if the risk from non-transponding aircraft and those not displaying height information does not reduce significantly over a suitable monitoring period (6-12 months), Areas A and C on the map at Enclosure 2 should be re-examined as possible TMZs.
- 2.6 In order to operate in the Stansted TMZ, it is proposed that aircraft will be required to operate a fully functioning pressure altitude reporting transponder or comply with the following access arrangements:
- Inbound and outbound procedures published by specific GA airfields and in accordance with any Letter of Agreement that the airfield has with Swanwick Terminal Control.
  - In accordance with flight details passed to and an acknowledgement from Farnborough Radar/Essex Radar.

## **STATUTORY DUTIES**

- 3 My statutory duties are set out in Section 70 of the Transport Act 2000 (the Act); the CAA (Air Navigation) Directions 2001, as varied in 2004 (the Directions); and Guidance to the CAA on Environmental Objectives relating to the Exercise of its Air Navigation Functions issued in 2002 by the DfT (then called Department of Transport, Local Government and the Regions (the Guidance)).

### **3.1 Safety**

- 3.1.1 My primary duty is to maintain a high standard of safety in the provision of air traffic services and this takes primacy over all other duties.<sup>1</sup> The high incidence of CAS infringements in the 2 areas proposed as TMZ poses a significant safety risk to traffic operating in and out of Stansted and consequently some form of action is justified. My staff, together with colleagues from the Safety Regulation Group of the CAA, have confirmed that the proposed airspace design and associated airspace management arrangements can be safely implemented. The proposal does accommodate access to the airspace for aircraft that do not have a fully operable transponder, either through the establishment of radio communications with the air traffic service provider or locally agreed arrangements. Equally, I am content that there is no adverse flight safety impact on those aircraft that will be displaced from the airspace if they cannot comply with the access arrangements. The MOD has been engaged in the planning of the proposal and a comprehensive Letter of Agreement has been developed to ensure the requirements of 614 Volunteer Gliding School at Wethersfield will be accommodated safely. The appropriate safety

---

<sup>1</sup> Transport Act 2000, Section 70(1).

management processes will be completed prior to the introduction of any operational change and thus safety levels will be maintained. I am therefore satisfied that the proposed airspace design can be safely adopted.

### **3.2 Airspace Efficiency**

3.2.1 I am required to secure the most efficient use of airspace consistent with the safe operation of aircraft and the expeditious flow of air traffic<sup>2</sup>. The proposed dimensions of the TMZs recognises the need for efficient use of the airspace by all airspace users and is the minimum required to mitigate the flight safety risk caused by infringements of CAS at Stansted at a critical stage of flight and in the area of greatest risk. Local arrangements for both military and GA airfields maintain the efficiency of the airspace and the introduction of TMZs is unlikely to have a noticeable impact in controller or pilot workload. In addition, access conditions for non-compliant aircraft have been considered and agreed. Consequently, I consider the introduction of these arrangements will represent a significant improvement in overall airspace efficiency.

### **3.3 Airspace Users**

3.3.1 I am required to satisfy the requirements of operators and owners of all classes of aircraft.<sup>3</sup> The sponsor completed a satisfactory consultation with all affected aviation stakeholder groups. Although a number of concerns were raised during the consultation period, mainly in regard to cost and practicalities, access and displaced traffic by the GA community, the sponsor provided adequate explanation and mitigation; the general indication is that the aviation community now understands the revised proposal for the limited area under the 2 stubs. Although there were no responses from commercial air transport users I am satisfied that NATS have fairly represented their requirements in setting out the change proposal. Therefore, I am satisfied that this proposal meets the requirements of airspace users.

### **3.4 Interests of Other Parties.**

3.4.1 I am required to take account of the interests of any person (other than an owner or operator of an aircraft) in relation to the use of any particular airspace or the use of airspace generally.<sup>4</sup> The nature of the proposal does not have implications for the non-aviation community and therefore the Change Sponsor has not consulted directly with local government authorities and non-governmental organisations. Members of Parliament whose areas of responsibility lie beneath the new airspace have been informed. I am therefore satisfied that the overall interests of other parties have been considered and no specific issues have been raised.

### **3.5 Environmental Objectives and Impact**

3.5.1 I am also obliged to take account of any guidance on environmental objectives given to the CAA by the Secretary of State<sup>5</sup>, which has been provided in the detailed Guidance to the CAA on Environmental Objectives relating to the Exercise of its Air Navigation Functions<sup>6</sup>. There will be no changes to IFR traffic using Stansted International Airport as a result of the proposal and therefore no changes to capacity, flight patterns and profiles, traffic mix, and track mileage.

---

<sup>2</sup> Transport Act 2000, Section 70 (2)(a)

<sup>3</sup> Transport Act 2000, Section 70(2)(b).

<sup>4</sup> Transport Act 2000, Section 70(2)(c).

<sup>5</sup> Transport Act 2000, Section 70 (2)(d)

<sup>6</sup> Issued by the then Department for Transport, Local Government and the Regions in January 2002.

3.5.2 In terms of access to TMZ airspace by GA and other airspace users, it is not possible to predict the number of access requests or the number of pilots who will choose to fly alternative routeings and therefore impossible to accurately determine the impact of the new airspace. However, the sponsor will be required to undertake a post implementation review of the TMZ airspace, which will include information on refusal of services as well as an assessment of the overall success of the proposal measured against historical trends in infringements, occurrence reports and air proximities.

3.5.3 Given the advice provided by my expert Environmental Research and Consultancy Department (ERCD) and my personal consideration of the proposal, I am satisfied that the proposed changes do not indicate there will be a tangible impact on the environment.

### **3.6 Integrated Operation of ATS**

3.6.1 I am required to facilitate the integrated operation of air traffic services provided by or on behalf of the Armed Forces of the Crown and other air traffic services.<sup>7</sup> In this respect, the MOD has been involved in the planning and consultation processes and have stated that they are satisfied that the impacts of the changes as proposed have been sufficiently mitigated.

### **3.7 National Security**

3.7.1 I am required to take into account the impact any airspace change may have upon matters of national security.<sup>8</sup> The sponsor has been fully engaged with the MOD throughout the planning and consultation stages of the process. The MOD<sup>9</sup> has confirmed that national security will not be impacted by this proposal.

### **3.8 International Obligations**

3.8.1 I am required to take into account any international obligations entered into by the UK and notified by the Secretary of State.<sup>10</sup> No new international obligations arise as a result of the proposal. The new airspace is in accordance with national regulatory requirements.

### **3.9 Consultation with the MOD**

3.9.1 Consultation requirements with the Secretary of State for Defence are set out in the Air Navigation Directions (the Directions)<sup>11</sup>. The MOD<sup>12</sup> has confirmed that they are content with the proposal.

---

<sup>7</sup> Transport Act 2000, Section 70(2)(e).

<sup>8</sup> Transport Act 2000, Section 70(2)(f).

<sup>9</sup> Through HQ Air Command.

<sup>10</sup> Transport Act 2000, Section 70(2)(g).

<sup>11</sup> The Civil Aviation Authority (Air Navigation) Directions 2001 as varied by the Civil Aviation Authority (Air Navigation) (Variation) Direction 2004.

<sup>12</sup> Through HQ Air Command.

## **ENVIRONMENTAL CONSIDERATIONS**

- 4.1 Environmental considerations have already been considered in a previous paragraph. As such, it is not possible to accurately determine the overall environmental impact of this change proposal as no reliable data is available on GA aircraft noise at those altitudes, but it is considered to be limited and therefore I am content that there is no requirement to refer this proposal to the Secretary of State. There will be an environmental benefit by reducing the number of occasions when avoiding action is required on unknown traffic. Potentially this can amount, depending on the circumstances to an additional 10 track miles each time an aircraft is given avoiding action. A copy of the ERCD summary report is at Enclosure 3.

## **CONSULTATION**

5.1 The Sponsor undertook consultation in accordance with the requirements of CAPs 724 and 725. Assessment of the proposal by DAP Business Management highlighted the following points:

- The Stansted TMZ consultation exercise was conducted in accordance with the six criteria set out in BERR's Code of Practice on Consultation.
- Overall, the quality of the Consultation documentation presented to DAP was acceptable.
- Some concerns were raised during the consultation; in particular, the cost for fitting new technology, exclusion from the airspace, and displacement of traffic. Response letters were sent to consultees addressing most concerns directly; themed responses were also provided in the Consultation Feedback Report.
- Information and data was shared with those requesting it.
- More stakeholders responded positively than negatively. However, the majority of individual GA pilots' responses were negative, in principle or otherwise. The sponsor provided additional information on proposals for the handling of non-equipped aircraft and the consultation period was subsequently extended by 11 days. The proposal was amended to remove the Areas A and C from the ACP submission.
- The Sponsor has met the DAP Airspace Change Proposal requirements and Airspace Regulatory requirements.

## **REGULATORY DECISIONS**

- 6.1 I am content that the proposed airspace design can be safely adopted and that flight safety will be enhanced by the provision of a more informed environment, thus satisfying my principal statutory duty. I am equally content that airspace efficiency will not be affected and the needs of the principal users will be met. I am satisfied that the final option presented provided the most pragmatic solution and I support the sponsor's proposal to review the expansion of the TMZs in line with the airspace identified in the Consultation Document, but only following a detailed assessment of the success of this proposal in reducing infringements at Stansted.
- 6.2 As we are still awaiting the relevant legislation on the creation of TMZs to complete the legislative process, I have therefore decided to recommend to the DfT that the introduction of the Stansted TMZ proposal proceed on the basis of a Statutory Instrument. The intention is that the revised airspace will become effective from 24

September 2009 (AIRAC10/2009). My staff will review the effectiveness of the arrangements 12 months after introduction and the results of this review will be published.

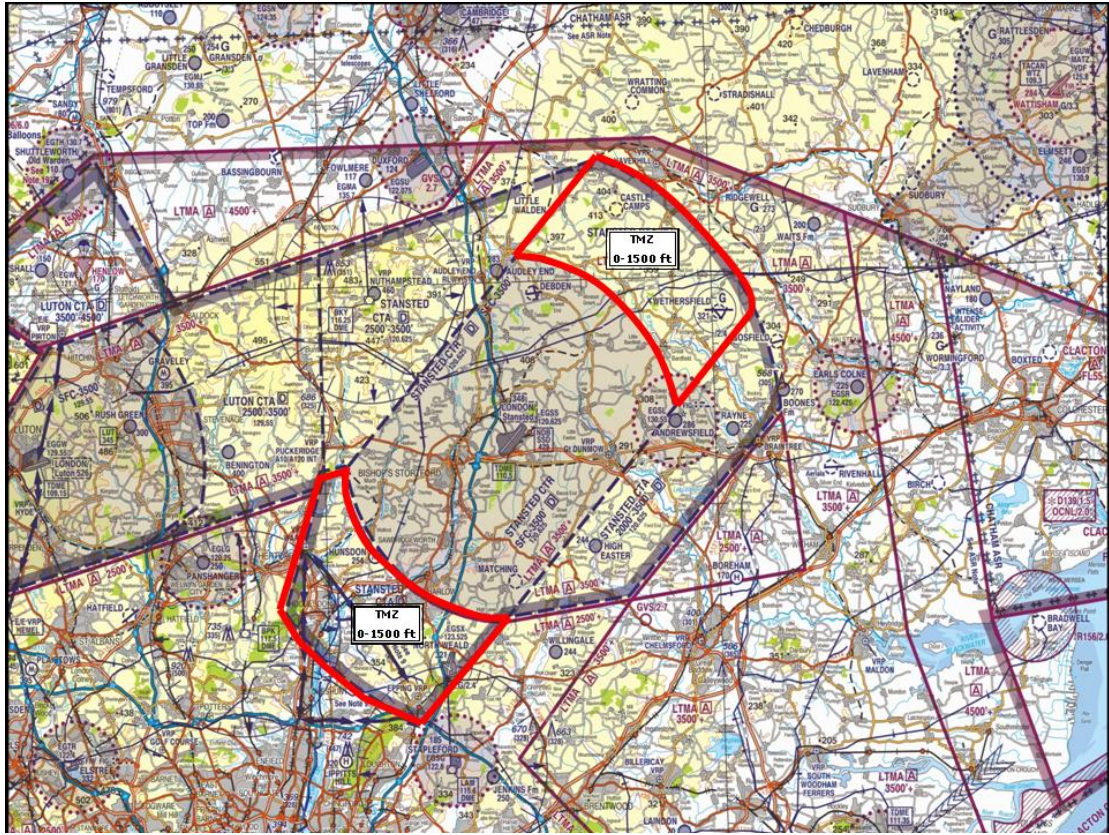
*Original signed*

M Swan  
Director

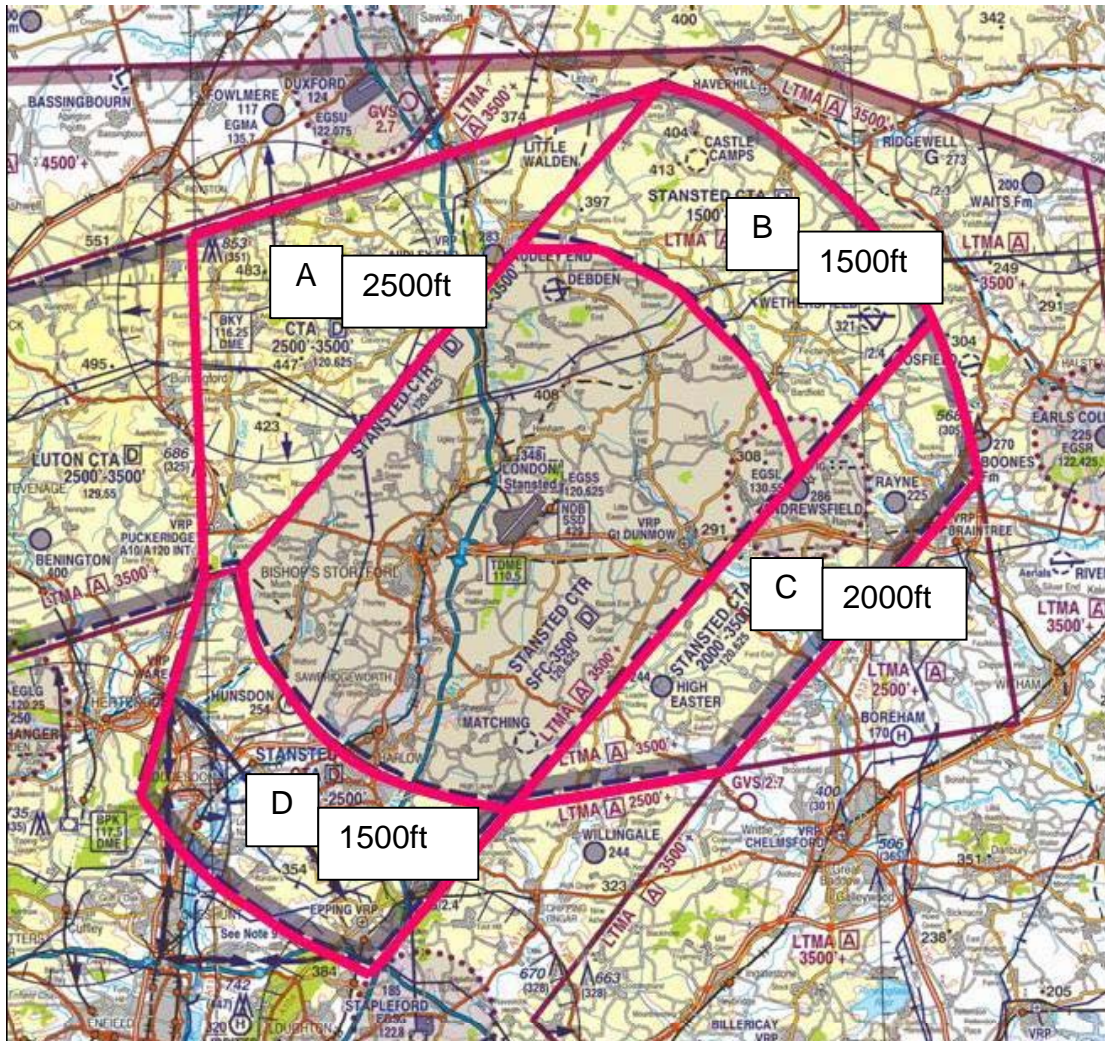
Enclosures:

1. Map of Proposed Stansted TMZs.
2. Map of TMZ Airspace proposed in Consultation Document.
3. Stansted TMZ – Environmental Summary Report.

# STANSTED TMZ ACP



# STANSTED TMZ CONSULTATION PROPOSAL



## Summary Report for the Stansted TMZs Airspace Change Proposal

This is a summary of the ERCD report titled “Stansted TMZs Airspace Change Proposal - Environmental Report For DAP” (dated 13 July 2009).

The sponsor did not undertake an assessment of the environmental impact of this proposal for two reasons:

- Firstly, there will be no changes to IFR traffic using Stansted airport as a result of the proposal. This means no changes to capacity, fleet mix, flight patterns, track mileage, flight profiles – and therefore no environmental impact to assess.
- Secondly, the introduction of Transponder Mandatory Zones (TMZs) may mean that some GA pilots will fly on routes that differ from those they would have taken if the TMZs were not in place. They may do this because they do not meet the requirements for access to the TMZs, or choose not to fly through the TMZ for some other reason. The extent to which this may occur, and which routes pilots will fly as an alternative, are impossible to gauge and therefore impossible to assess without making broad and subjective assumptions.

For these reasons, the CAA was satisfied that it was not possible to assess the environmental impact and therefore there was no need to consult with non-aviation stakeholders, but it was noted that the consultation material could have better explained the reasons for not undertaking an environmental assessment.

Despite being unable to assess the environmental impact, it is still likely that there will be an environmental impact, as not all GA aircraft will be able to (or want to) cross the TMZs if implemented. The environmental impact is entirely dependent upon the extent to which GA pilots re-route as a result of the TMZ

That environmental impact may be small, based on the premise that the sponsor has attempted to mitigate the impact by enabling as many GA aircraft as it feels possible to still fly through the TMZ. Having considered the impact of the mitigating measures with my operational colleagues within CAS, I am advised that the proposed mitigations are likely to allow access for a relatively high proportion of those airspace users affected.

If they occur, the environmental impacts will be on noise and CO<sub>2</sub> emissions. For every GA flight that takes an alternative route as a result of the TMZ, the impact is likely to be:

- Additional noise at those points beyond the TMZ that are being newly overflowed (or increasingly overflowed).
- Less noise at those points beneath the TMZs, as a result of fewer GA flights flying through the TMZ.

In both instances it is not possible to gauge the level of the noise, or the numbers of people that may be affected.

- A negative impact on CO<sub>2</sub> emissions as re-routing is more likely to incur extra track mileage and therefore additional fuel burn and CO<sub>2</sub> emissions

Andrew Green

Environmental Research and Consultancy Department

14 July 2009