

All NATMAC Representatives

9 September 2011

CAA DECISION LETTER

Dear Stakeholders,

LONDON ARRAY (LA) AND THANET OFFSHORE WINDFARM (TOW) TRANSPONDER MANDATORY ZONES (TMZ)

1. INTRODUCTION

1.1 During April 2011, the Directorate of Airspace Policy received a formal proposal from Infratil Airports Europe on behalf of Infratil Kent Airport Limited (Manston) to establish TMZ airspace encompassing the LA and TOW¹. Upon receipt of the proposal, my staff undertook a detailed analysis of the operational requirements, the environmental assessments and the consultation process. The purpose of this letter is to provide you with an overview of the proposal and my related decision.

2. PROPOSAL OVERVIEW

2.1 The ACP has been developed to negate the impact of increasing levels of wind turbine-generated primary surveillance radar (PSR) clutter, specifically that caused by the LA and TOW developments. In support of the ACP, Infratil has provided evidence that indicated that the existing TOW turbines and the foundations of the relatively few LA turbines that have been constructed to date² already create PSR clutter on Manston's radar displays. It is the anticipated expansion of the areas of clutter that underpin the TMZ proposal. It was assessed that, when fully operational, the 2 windfarms will collectively create a level of radar clutter that, without mitigation, would:

- Create significant difficulties associated with the ability of Manston controllers to maintain aircraft track identity, both in respect of known and unknown traffic.
- Limit Manston controllers' ability to provide the full gamut of ATSOAS.
- Require routing of traffic away and clear of radar clutter, thus involving a significant increase in track mileage.

¹ LA (phase 1 - 175 turbines, maximum blade tip height 175m (574ft), construction Sept 11 – Dec 12) is located approximately 15nm / 27km north of the Airport. TOW (100 turbines, max blade tip height 115m (377ft), located approximately 7nm / 12km northeast of the Airport, is already operational.

² As of 3 July 11 the foundations of 23 of LA Phase 1 turbines were in place. These foundations have a height of less than 50m.

- Reduce to an untenable degree the volume of airspace available for use by Manston controllers to vector aircraft particularly those joining and leaving controlled airspace (CAS) to the north of the Airport.
- Generically precipitate a “less safe” operating environment than is currently the case.

2.2 The proposed TMZs form part of a 4 stage mitigation programme: the installation of a Mode S SSR facility at Manston; the introduction of subject TMZs covering the TOW and LA sites; Manston ATC being approved to provide radar services within the TMZ(s) using SSR alone³; and blanking out the PSR returns within the TMZ airspace. The radar installation is well advanced and operational handover is expected during Q4 2011. SRG Aerodrome and Air Traffic Standards Division (AATSD) has confirmed that approval for Manston ATC to provide an SSR-only service within the TMZs will follow the successful installation of their new PSR and SSR systems. Such approval will also include the provision for the blanking out of the primary returns within the TMZs to eliminate clutter generated by the wind turbines.

2.3 There are 2 new airspace elements to the proposal (map extracts at Annex A):

- An irregular shaped, straight-sided TMZ surrounding the LA development, extending laterally to 2km beyond the physical limits⁴ of the windfarm and vertically from the surface to the base of CAS. As the TMZ would be located beneath a confluence of a segmented portion of the Clacton CTA the upper limit will vary between FL55, FL65 and FL85⁵. The TMZ would be permanently active and identified as ‘London Array TMZ’.
- An irregular shaped, straight-sided TMZ surrounding the TOW development, extending laterally to 2km beyond the physical limits of the windfarm and vertically from the surface to the base of CAS, FL105. The TMZ would be permanently active and identified as ‘Thanet TMZ’.

2.4 The development of the ACP and the design of the proposed TMZs accord with the DAP Policy Statement concerning TMZs.

3. STATUTORY DUTIES

3.1 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.⁶

3.2 Safety

3.2.1 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.⁷ In this respect, it is evident that the

³ MATS Part 1 dictates that on occasions other than when there are “temporary deficiencies within PSR cover” or “immediately after PSR failure” the use of SSR to provide horizontal separation is subject to CAA approval.

⁴ The buffer allows 2 km to ensure that an aircraft exiting the PSR blanked area generates a useable processed radar symbol.

⁵ In reviewing the ACP my staff considered whether for simplicity the LA TMZ should have a universal top level of FL85 and partially penetrate the Clacton CTA (Class A). However, it was assessed that such arrangements would introduce operational complications that would outweigh the purely aesthetic benefit of simpler charting and notification details.

⁶ Issued in 2002 by the DfT (then called the Department of Transport, Local Government and the Regions) (the Guidance).

⁷ Transport Act 2000, Section 70(1).

LA turbines will be 'visible' to Manston's PSR and that the problems caused by the resultant radar clutter, in combination with that generated by the TOW turbines, require mitigation. There is currently no technical mitigation available to Manston which would overcome the impact of the clutter on the unit's ability to provide an ATS.

- 3.2.2 The western edge of the LA TMZ would extend within approximately 4nm of the D138 (Shoeburyness) complex. Whilst no aviation stakeholders raised any related issue during the ACP consultation, DAP and SRG staff considered the potential 'funnelling' effect of such airspace arrangements. Whilst emphasising the significance of the offshore location, CAA staff assessed that, such was the volume of traffic involved, no safety issue was likely to arise.
- 3.2.3 I am consequently content that the LA and TOW TMZs are fundamental in mitigating the impact of the LA and TOW-generated PSR clutter on the Manston ATC's ability to provide an ATS and that their establishment is appropriate in the maintenance of a safe airspace environment.

3.3 Airspace Efficiency

- 3.3.1 I am required to secure the most efficient use of the airspace consistent with the safe operation of aircraft and the expeditious flow of air traffic.⁸ The proposed dimensions of each TMZ recognised the need for efficient use of airspace; I am satisfied that the dimensions of the TMZs are of the minimum size to meet the safety requirements. Whilst the TMZs will be permanently active, I am content that associated access arrangements (further discussed at 3.4.2) and the limited background usage of associated airspace are such that there will be no meaningful impact upon the operations of aircraft wishing to cross the TMZ airspace.

3.4 Airspace Users

- 3.4.1 I am required to satisfy the requirements of operators and owners of all classes of aircraft.⁹ The Sponsor conducted extensive consultation with all affected stakeholder aviation groups as part of the ACP process and the impact of the TMZs upon other airspace users has been appropriately considered. In addition to the safety benefits that underpin the ACP, the TMZs (as part of the larger mitigation package) will facilitate optimal arrival and departure tracks for Manston traffic joining and leaving CAS; without the TMZs, radar clutter would necessitate a significant increase in track distance.
- 3.4.2 Access arrangements mean that only aircraft that were neither SSR nor VHF-radio equipped would be unable to facilitate TMZ crossing; transponding aircraft will be able to transit without further requirement or specific ATC clearance and non-transponding aircraft will be able to seek clearance to transit on a tactical basis via VHF contact with Manston ATC. Given the offshore location of the TMZs, the anticipated number of aircraft that would necessarily have to avoid the TMZ airspace can reasonably be expected to be extremely limited. Records relating to number of transits of the TMZs, occasions where aircraft have necessarily had to avoid such airspace and TMZ infringements will be maintained and subjected to scrutiny by my staff at periodic intervals.
- 3.4.2 I am content that the TMZs will satisfy the requirements of Manston-related air traffic. I am satisfied with the Sponsor's commitment to provide access to the revised airspace when it is safe and appropriate to do so and, therefore, that the revised structures will not be detrimental to other airspace users as a whole.

⁸ Transport Act 2000, Section 70(2)(a).

⁹ Transport Act 2000, Section 70(2)(b).

3.5 Interests of Other Parties

3.5.1 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.¹⁰ Notwithstanding the offshore location of the proposed TMZs, the Change Sponsor consulted widely with relevant local government authorities and non-governmental organisations. There were no meaningful concerns expressed. I am content that the interests of affected non-aviation parties have been satisfied.

3.6 Environmental Objectives

3.6.1 In performing my statutory duties, I am obliged to take account of the Guidance provided by the Secretary of State¹¹. My detailed considerations of the environmental aspects of this proposal are covered later in this letter.

3.7 Integrated Operation of ATS

3.7.1 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.¹² Any related Interaction between ATS providers will be accommodated in the same fashion as at present, via extant ATC liaison procedures and/or specific arrangements between ATS Units.

3.8 National Security

3.8.1 I am required to take into account the impact any airspace change may have upon matters of national security.¹³ There are no national security issues identified; I am therefore satisfied that national security requirements will not be jeopardised by implementation of the change.

3.9 International Obligations

3.9.1 I am required to take into account any international obligations entered into by the UK and notified by the Secretary of State.¹⁴ No new international obligations arise as a result of the airspace change proposal. The new airspace has been designed in accordance with national regulatory requirements.

4. ENVIRONMENTAL CONSIDERATIONS

4.1 The Environmental Research and Consultancy Department (ERCD) report on the environmental impact of the proposed establishment of the TMZs highlights that the rationale for the ACPs is not related to improving the environmental impact of aviation, but is safety driven. Whilst the environmental impacts have been considered by the Sponsor it has not been possible to gauge the potential environmental impact for two reasons:

- The exact extent of current usage of the airspace by non-transponder aircraft is, whilst estimated to be minor, unknown and the impact upon such aircraft of implementing the

¹⁰ Transport Act 2000, Section 70(2)(c).

¹¹ Transport Act 2000, Section 70(2)(d).

¹² Transport Act 2000, Section 70(2)(e).

¹³ Transport Act 2000, Section 70(2)(f).

¹⁴ Transport Act 2000, Section 70(2)(g).

TMZs cannot be accurately forecast and;

- This uncertainty and unpredictability makes any modelling of either the noise impact or CO₂ emissions so subjective to be of little value.

4.2 However, ERCD noted that, given the offshore location, the likelihood that only small aircraft would have to (or choose to) route clear of the TMZ(s) and any such re-routing is unlikely to involve overflight of land or the coastline, it is reasonable to anticipate that any environmental impact would be minimal. Specifically, the ERCD Report commented that; any changes in traffic pattern are extremely unlikely to have a noise impact on the local population, emissions impact (if any) is likely to be small, impact upon tranquillity would be minor (at worst) and the impact upon biodiversity is likely to be negligible. Additionally, ERCD highlighted that whilst the ACP and associated consultation did not make specific mention of the impact upon tranquillity and visual intrusion, this was not a significant omission given the small chance of their being any such impact.

4.3. The Environmental Assessment concluded that any negative impact caused by the TMZs' establishment is likely to be small, possibly negligible and, in any case, cannot be accurately estimated. It is considered that there is no requirement to obtain further approval from the Secretary of State for Transport in respect of the environmental impact.

5. CONSULTATION

5.1 The Sponsor undertook a public consultation between 9 August and 8 November 2010 in accordance with the requirements of CAPs 724 and 725 and in line with the Cabinet Office Code of Practice for Consultation. The consultation document was distributed to 72 organisations/individuals including aeronautical stakeholders, local County, District and Parish Councils, local Members of Parliament and environmental-focused organisations. The document was also lodged on the Airport's website.

5.2 The assessment of the proposal by DAP's Airspace Policy Coordination & Consultation section noted the following:

- The consultation generated a very high response rate from operational consultees (45 respondees / 87%). Of these identified operational stakeholders, 40% supported the proposal, the rest were neutral or did not respond; there were no objections.
- The consultation response rate from environmental consultees was also very high (15 respondees / 75%). Of these 30% were in favour of the proposal; there were no objections.
- Four additional stakeholders (2 organisations and 2 individuals) not identified by the sponsor also provided contributions. Of these, a single individual maintained an objection to the proposal.
- The single maintained objection to the TMZ proposal concerned the potential for the TMZs to limit the airspace available to non-transponder aircraft. In this respect I acknowledge that where a non-transponder equipped aircraft also lacked a VHF radio this limitation would exist; see related comment at paragraph 3.4.1.

5.3 The Consultation Assessment records that this was a well run consultation and that the sponsor was very proactive. However, whilst the consultation material was of a good standard, the documentation did not adequately explain the impact that fully operational LA and TOW developments would have on Manston's PSR. Nevertheless, given the overall consultation response rate (some 80%+), the generic lack of concern from stakeholders

(aviation or otherwise) and that no consultee queried the lack of explanatory detail, it was not assessed that this negated the effectiveness of the consultation process.

6. REGULATORY DECISIONS

- 6.1 I am content that the proposed airspace design is safe, which satisfies my primary statutory duty. Thereafter, when considering the competing demands of my remaining duties, together with the Directions and Guidance, I am satisfied that the establishment of the LA and TOW TMZs (as part of a larger mitigation programme- see paragraph 2.2) is appropriate.
- 6.2 The TMZs, to be identified as the 'London Array TMZ' and the 'Thanet TMZ', will be formally established on 17 November 2011 at AIRAC 12/2011. A supporting Aeronautical Information Circular will be published during early October 2011.
- 6.3 My staff will review the effectiveness of the arrangements in due course. Under normal circumstances airspace change Post Implementation Reviews are conducted 12 months after the associated airspace change. However, in this case the timing of the Review will be delayed until Q1 2013 when the LA and TOW developments will be fully operational.

Yours sincerely,

Mark Swan

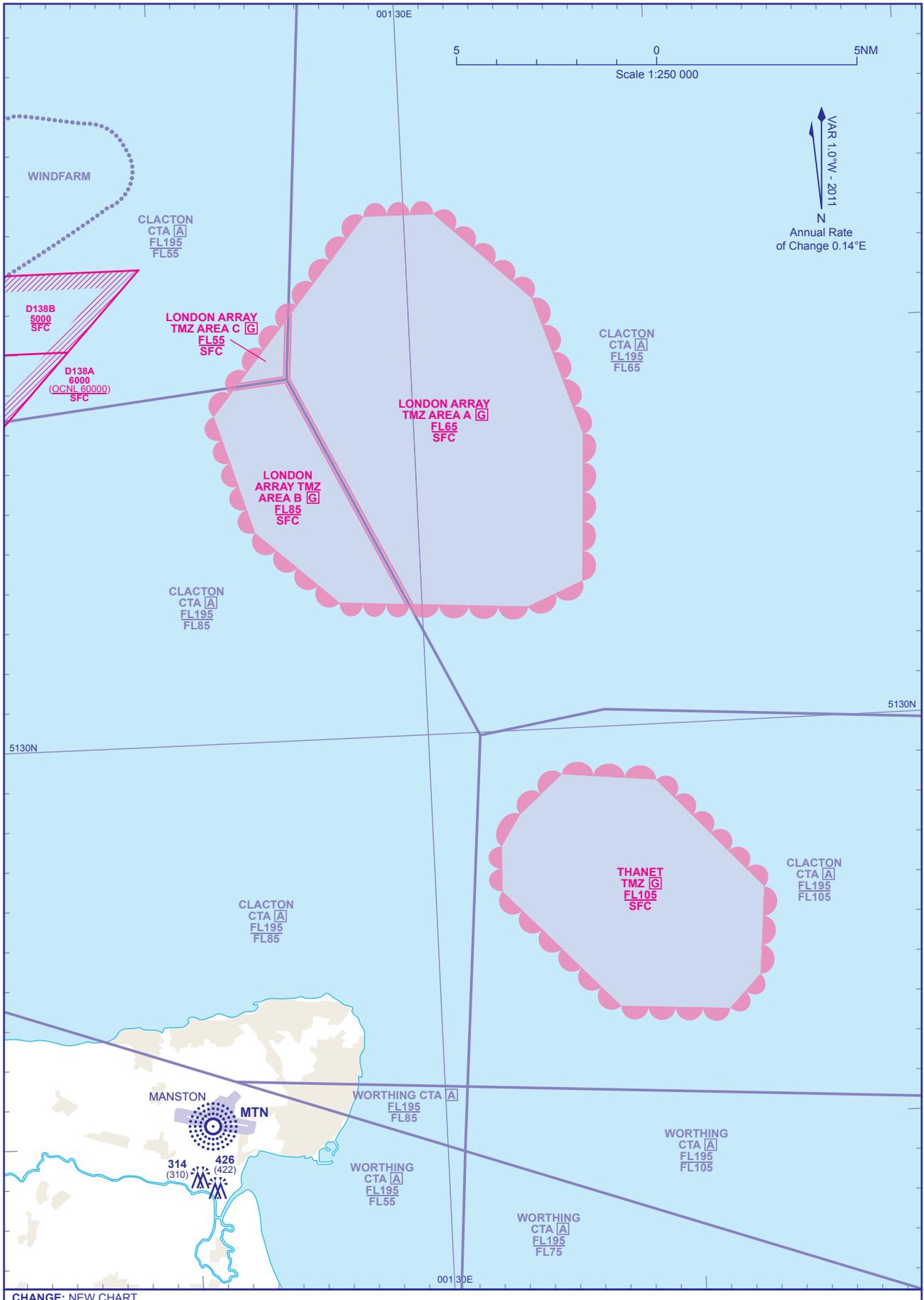
M Swan
Director

Enclosures:

1. Map of Proposed Airspace.

Distribution:

NATMAC Membership



CHANGE: NEW CHART.

AERO INFO DATE 21 JUL 11