



DONG Energy Programme Asset Manager

25 September 2015

## CAA DECISION LETTER

### **WALNEY EXTENSION OFFSHORE WIND FARM TRANSPONDER MANDATORY ZONE (TMZ) - AIRSPACE CHANGE PROPOSAL (ACP)**

#### References:

1. Walney TMZ Airspace Change Proposal – Issue 3 dated 05 Mar 15
2. Walney TMZ Airspace Change Proposal Addendum – dated 05 May 15

## **1 INTRODUCTION**

- 1.1 DONG Energy is proposing an extension to the existing Walney Offshore Wind Farm in Morecombe Bay. The new wind turbine generator (WTG) blade tips will extend to 223m (732 ft) above sea level and will present themselves as reflecting moving objects within the coverage of the BAe Warton Primary Surveillance Radar (PSR) and appear as clutter on the operators display. To ensure current and future operations can continue in the area in an efficient manner with an effective ATC service, the impact of the clutter on the Warton PSR must be minimised. DONG Energy collaborated with BAe Systems Warton to develop mitigations and submitted an ACP (References 1 and 2) to the Safety and Airspace Regulation Group (SARG).

## **2 INFORMATION THAT HAS BEEN CONSIDERED**

- 2.1 In making my decision, I have considered a number of documents including the Change Sponsor's Consultation Document and ACP, and the CAA's Operational Assessment, Consultation Report and Environmental Analysis. These documents will be published on the CAA's website shortly.

## **3 PROPOSAL OVERVIEW**

- 3.1 The ACP proposed that the most suitable mitigation against the effects described was a 3-part solution; the introduction of a TMZ, radar blanking in the area concerned and authority to operate SSR only within the TMZ. A TMZ is an airspace model implemented effectively in other geographic areas. The TMZ would extend from the surface to Flight Level 100, above which height transponder carriage is mandatory, and would be established to coincide with the operating hours of Warton Lower Airspace Radar Service (LARS). Warton is the only Air Navigation Service Provider whose operations are affected by the WTGs. Whilst implementation is not until 2017, in order to support DONG Energy investment decision timescales SARG approval has been sought early.



## 4 CONSULTATION

- 4.1 SARG has conducted an assessment of the consultation and concluded that the Consultation Report and associated material met SARG requirements and the criteria set out in the Cabinet Office's Consultation Principles (2013 Update).
- 4.2 This was a well-run consultation demonstrating a willingness to engage with the various stakeholders in order to mitigate the issues raised, and I am satisfied that the consultation was in accordance with the requirements of CAPs 724 and 725.

## 5 STATUTORY DUTIES

- 5.1 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.<sup>1</sup>
- 5.2 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>2</sup> Air Traffic Management (ATM) within SARG are currently reviewing the supporting Safety Plan and associated documentation in order to permit SSR only operation within the TMZ; the expectation, based on the evidence reviewed so far, is that the necessary approval to operate as described within the ACP will be granted. In this respect, I am satisfied with the proposal.
- 5.3 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.<sup>3</sup> The CAA considers that the most efficient use of airspace is defined as:

*"The most aircraft movements through a given volume of airspace over a period of time in order to make best use of the limited resource of UK airspace from a whole system perspective."*

- 5.4 The cumulative impact of additional clutter from the Walney Extension WTG will require the Warton radar to be blanked in this area. Technical PSR solutions are in the advanced stages of design but as yet there is no technical solution that offers the highest levels of mitigation to the radar clutter effects and has the associated UK safety case required to allow unhindered ATC services. However, should an economically viable technical solution exist prior to the date of implementation, this should be implemented rather than the radar blanking and TMZ.
- 5.5 Currently the establishment of a TMZ is appropriate, and satisfactorily accommodates Warton ATC's needs; however, the proposed size is restrictive for other airspace users. To have minimal impact on GA traffic operating in the area I consent a reduced TMZ by removing the buffers and following the edge of the Danger Areas, as graphically represented in the Annex. TMZs are not subject to the buffer policy, and the offshore nature of the WTGs allows significant time for ATC to identify and react to a potential non-transpondering and non-talking aircraft who may infringe. In addition the extensive survey conducted by DONG Energy and Warton stated that traffic flow was predominantly along a 'coastal route' and that 'traffic was predominantly transponder equipped and always in two-way radio contact' with an ATC unit.
- 5.6 The revised TMZ recognises the need for the efficient use of airspace, and I am satisfied that these TMZ dimensions are of the minimum size to be both efficient and meet the safety

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<sup>1</sup> Revised in 2014 by the DfT (the Guidance).

<sup>2</sup> Transport Act 2000, Section 70(1).

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

and operational requirements. Whilst the TMZ will be permanently active during the operating hours of the Warton LARS service, I am content that associated access arrangements and the background usage of airspace are such that there will be no meaningful impact upon the operations of aircraft wishing to cross the TMZ airspace. Warton have stated that non-SSR equipped aircraft will not be denied access to the TMZ airspace unless such permission would compromise a complex trial or evaluation mission. I would expect Warton ATC to make every effort to facilitate transits of the TMZ by GA traffic, SSR equipped or otherwise. The supporting traffic surveys suggest that the instances where GA traffic might be unable to transit the TMZ would be minimal. In this respect, I am satisfied that the most efficient use of airspace is being used.

- 5.7 In performing my statutory duties, I am obliged to take account of the extant guidance provided by the Secretary of State,<sup>4</sup> namely the 2014 Guidance to the CAA on Environmental Objectives. The Environmental Research and Consultancy Department (ERCD) has undertaken an assessment of the environmental impact of this change. Having carefully considered this information, I have concluded that the change will have a minimal (if any) overall environmental impact, and in this respect I am satisfied the proposal meets my statutory environmental objectives.

## **6. REGULATORY DECISION**

- 6.1 I am satisfied that the proposed airspace design is safe and meets all other aspects of my statutory duties set out in the Act. The ACP produces no conflicts between any factors I have a duty to take into consideration, has a positive or neutral impact on each of the factors identified in section 70(2) of the Act, and there are no exceptional circumstances to justify departing from the CAA's standard practice.
- 6.2 I have therefore decided that a reduced TMZ over the Walney Extension Wind Farm, as depicted in the annex, is the most effective measure to mitigate the WTGs, and support the ACP submitted.
- 6.3 The revised airspace is currently scheduled to become effective in July 2017. When confirmed it will be promulgated via a single AIRAC cycle. If you have any queries, the SARG Project Leader, [REDACTED] may be contacted on [REDACTED] or via e mail: [REDACTED]
- 6.4 In line with our standard procedures the implications of the change will be reviewed after one full year of operation, at which point my staff will engage with interested parties to obtain feedback and data to contribute to the analysis.

Yours sincerely,

Mark Swan  
Director, Safety and Airspace Regulation Group

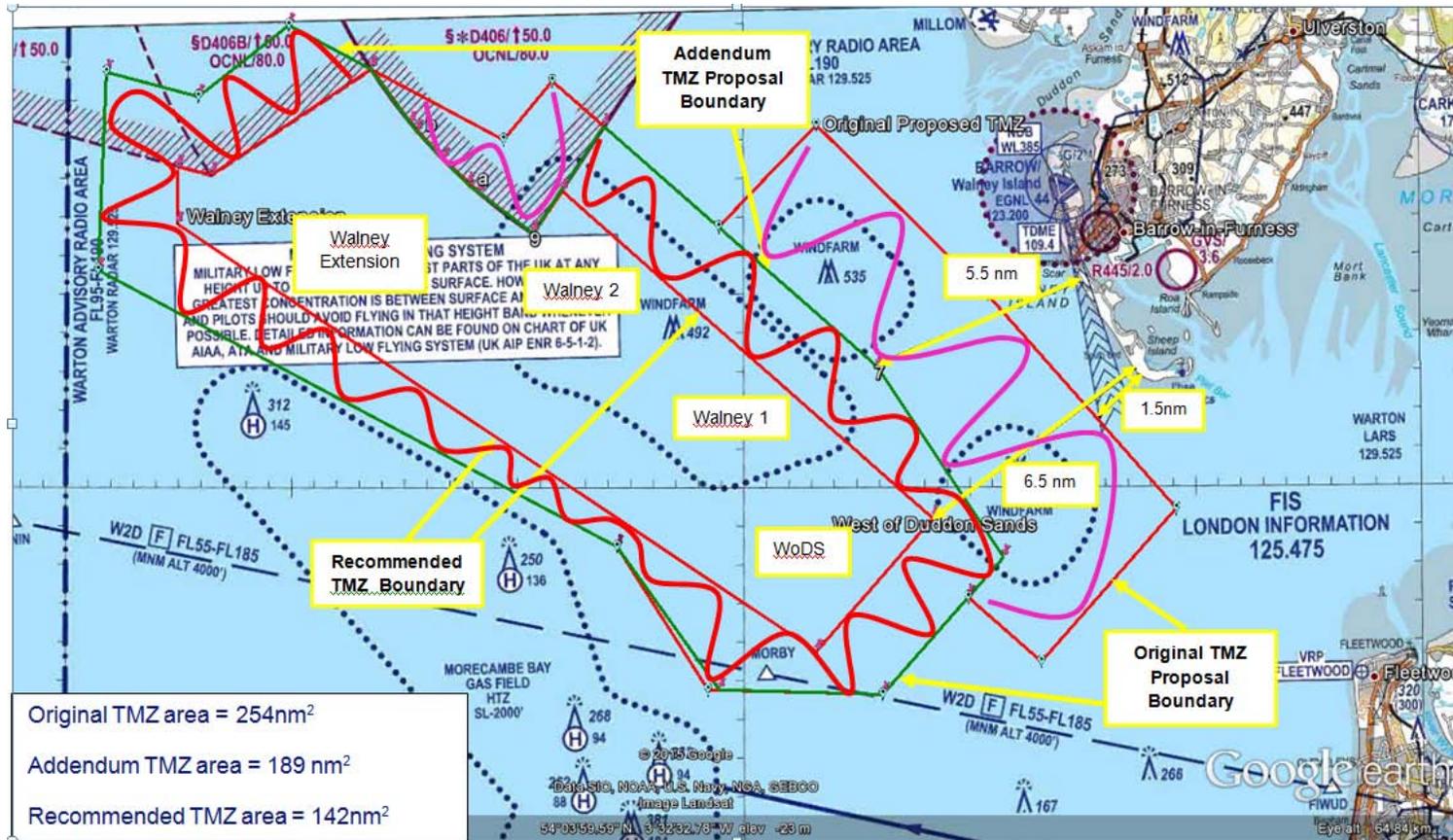
Annex:

- A. Diagram of the Reduced TMZ for Walney Offshore Wind Farm

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

Diagram of the Reduced TMZ for Walney Offshore Wind Farm



**Civil Aviation Authority**

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