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Briefing Note

Our ref 64194/06/MS/OW
Date 22 August 2025
To Planning Inspectorate
From Oxford Aviation Services Limited

Subject Deadline D4 – Response to ExQ2

1.0 Introduction

1.1 This response has been prepared on behalf of Oxford Aviation Services Limited ("OASL"), the operators of London Oxford Airport ("the Airport"), in response to the publication of written questions (ExQ2) by the Examining Authority concerning the application by Photovolt Development Partners ("PVDP") for an Order Granting Development Consent for the Botley West Solar Farm project.

2.0 Response 1 – those questions where the Examining Authority has requested comment from OASL.

Air Traffic and Aviation Safety

Q 2.16.7 Thermal plumes

In light of the forthcoming change request and the applicant's omission of land in proximity to Oxford Airport, are the concerns regarding thermal plumes resolved? If not, why not and which areas cause the concern to remain?.

2.1 The applicant has undertaken to prepare modelling of the potential effect of thermal plumes on operations at the Airport. Until such time that this modelling has been carried out and shared with OASL, for its own consideration, it is not able to confirm that the omission of land in proximity to the Airport has resolved the outstanding concerns raised previously.

Q 2.16.9 Impacts on Radar

Oxford Aviation/ Defence Infrastructure Organisation - Are you aware of any instances where radar has been adversely impacted by thermal plumes and, if so, how has such an issue been overcome in the past?

2.2 OASL understands that the Ministry of Defence (MOD) has expressed concern regarding the development's interaction with radar equipment. The MOD likely has sound reasons for its observation and possesses a greater degree of technical expertise in radar performance than OASL.

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2.3 Unlike the military, most civil Air Traffic Control (ATC) units do not make use of primary radar returns, as they operate within controlled airspace where all aircraft are equipped with ATC transponders. Consequently, these units use only secondary returns, which provide a clearer ATC picture by filtering out signals from, for example, weather phenomena.

2.4 However, the Airport operates exclusively in uncontrolled airspace and manages a significant number of non-transponding aircraft, such as gliders. As a result, it relies on both primary and secondary radar returns to show the complete picture.

2.5 A secondary return is a relatively powerful transmitted signal sent by an aircraft's ATC transponder in response to a received radar beam. In contrast, a primary return is merely a reflection of the radar beam and is often very weak—particularly when the aircraft is constructed from non-reflective materials (such as composite gliders), or is small or distant. Certain weather conditions are known to impair the performance of primary radar.

2.6 It is therefore critical that thermal inclines do not obscure, weaken, refract, or dilute primary radar returns. At this stage of the examination, OASL has not seen any evidence from the applicant demonstrating that the thermal inclines likely to result from these proposals will have no deleterious effect on radar performance.