

Ms Emma Fitch
Cambridgeshire County Council
SH135, Shire Hall
Castle Street
Cambridge CB3 0AP

Cc Ms Helen Wass (CCC)

11 July 2016

Dear Emma

**IWM Duxford submission re Planning Application No S/0008/15/CW
Novus Environmental**

Thank you for sending through a copy of the latest report submitted by IWM Duxford in relation to the planning application by Novus Environmental.

We have reviewed this report and we conclude that this does not in any way alter the findings and conclusions of our earlier report provided for you. We have also discussed the matter with the UK CAA who advise that they do not act as arbitrators in matters of this type. They did however point out that if a 25m chimney were to constitute a significant safety risk, IWM Duxford, as a CAA licensed aerodrome, should have advised them that the obstacle clearance surfaces and, if appropriate, the declared runway distances must be reduced below that defined in CAP 168 – 'Licensing of Aerodromes' as part of the aerodrome's safety case. They do not appear to have done this.

It must be noted that all aviation activities have some element of risk and all those participating in these as pilots or passengers tacitly accept this. The issue is whether this risk is acceptable. We believe the IWM Duxford has substantially overemphasized the safety risks in respect of the proposed chimney, its associated smoke plume and pyrolysis plant and that all the risk likelihoods are extremely improbable.

We agree with IWM Duxford that there is a lack of aircraft performance data for many historic and vintage aircraft types. Nevertheless, it is possible to make a clear assessment as to whether the chimney and the associated pyrolysis plant (Vetspeed) represents a significant safety hazard in respect of operations at IWM Duxford.

As indicated in the attached diagram, the plant is approximately 1,280m from the upwind threshold of R24 Grass. The whole Vetspeed site subtends an angle of around 10 degrees, measured at this threshold. A turn of 5 degrees at the threshold would therefore miss the site altogether. This figure is well within the norms of any departure for any aircraft (including historic and vintage aircraft) in any operational weather conditions including those flown by pilots undergoing training.

In the case of an engine failure at take-off (EFATO), the chimney and the plant could still be avoided, particularly if the aircraft turns immediately after take-off as part of a standard departures procedure. Dependent on the aircraft height at the time of the engine failure, a further limited turn could be made to avoid the chimney and the plant. The area to the right and left of the Vetspeed site appears to have few obstacles of any sort and are generally acceptable options for an off-airfield emergency landing

As indicated in IWM Duxford's report, take-off is generally regarded as a greater safety risk than approach and landing. Nevertheless, the chimney is well within the CAP 168 obstacle clearance limits on approach for a 3 degree glide slope. We disagree with the IWM Duxford that some aircraft normally using the grass runway (which are typically smaller aircraft) would not be capable of a 3 degree straight-in approach above the chimney nor would not be able to make a curved approach to avoid the chimney.

IWM Duxford suggest that smaller aircraft could be affected by wind-drift which would increase the risk of collision with the chimney. Again, we do not accept this as, if this is a cross-wind, pilots could use this to their advantage to make the necessary turn. Similarly, whilst higher air temperatures would increase the take-off distance required and the rate of climb, any risk of collision with the chimney would still be negligible

As far the smoke plume is concerned, we believe that aircraft would normally be able to avoid this altogether. If however, an aircraft were to fly through this, the impact of the plume temperature and emissions on the aircraft and on the pilot (if an open cockpit) would again be negligible in view of the very short period of exposure.

Whilst all the factors described do have some very slight impact on overall aircraft safety, the risk of any collision with the chimney or in the area of the plant itself must be assessed as improbable or highly improbable under CAA definitions and should therefore be deemed as acceptable in operational terms. As a result, we do not believe that the plant and the chimney represent a 'significant safety risk'.

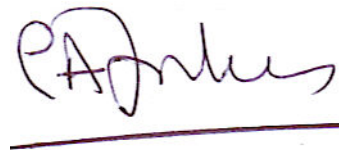
IWM Duxford's latest report states that it has been endorsed by the Chairman of the General Aviation Safety Council (GASCo), Air Commodore Rick Peacock-Edwards. This would appear to be in a personal capacity rather than endorsed by GASCo itself. It should be pointed out that Air Commodore is the Chairman of IWM Duxford's Flying Control Committee.

I would also like to put on record my own qualifications and experience and that of my team who assisted me in preparing this report. I have been employed for over 32 years in the aviation industry – initially with a commercial airline and subsequently with the UK Civil Aviation Authority (in the Department of Operational Research and Analysis). For over 20 years I have worked as a Senior Consultant and

subsequently as Director of Alan Stratford and Associates Ltd where I have undertaken a wide range of technical studies including assessment of the operational implications of potential building development around UK airfields, including Wycombe Air Park (Booker), Bicester and Truro airfields. My colleague, Rod Fewings is a civil engineer specialist in airport issues and was previously a Senior Lecturer in the Department of Air Transport at the University of Cranfield. Nils Jamieson is a commercial pilot who also flies vintage aircraft. He is an advisor with the General Aviation Safety Council. Nils has advised specifically on the performance capability of aircraft using Duxford including vintage and classic aircraft.

Both myself and Nils will be attending the Planning Committee meeting on 21 July and will be able to respond to any questions that may arise.

Yours sincerely

A handwritten signature in purple ink, appearing to read 'P A Forbes', is written above a solid horizontal line.

Peter A Forbes
(Director)



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500 m

Measure distance

Total distance: 1.28 km (4,199.61 ft)