

APPENDIX 3

MEMO From Ian Haines

To: Yee Cheung
Our ref 17/03413/ECONPL
Your ref FUL/MAL/17/01071
cc
Date 23 November 2017

Proposal: Variation of conditions 13 and 14 on approved planning permission FUL/MAL/09/00250 (Re-instatement of airfield and erection of 2no. aircraft hangers to match former buildings on site)

Location: Stow Maries Aerodrome Hackmans Lane Cold Norton Essex (010013997738)

I refer to your memo in connection with the above mentioned application and would make the following comments.

The application 17/01071/FUL has been evaluated for noise impact. It is similar to the refused application 16/01142/FUL but is much simpler, seeking a lower increase in flying activity through the variation of just two of the original conditions from the current 2009 planning approval. These changes are summarised below:

Condition 13

The proposal seeks to vary Condition 13 which controls the number and duration of public flying events. These are renamed "Special Public Flying Events" and the number permitted in any calendar year is increased from **2** to **4**. There is an attempt to balance this increase by reducing the maximum duration of these events from **3** days to **2** days. As before these events can only be organised in accordance with a scheme submitted to and approved by the LPA. The current requirement for that scheme to include a travel plan and park and ride facilities does not appear in the revised condition.

Condition 14

The proposal seeks to vary Condition 14 which controls the maximum permitted flight movements. It clarifies that a flight movement is a landing or take off and increases the daily flight movement allowance from **12** to **30**. It removes the current cap of **74** movements per month and increases the current annual cap from **360** to **4,200**. The current provision which allows the LPA to vary the numbers for public events is replaced by a more specific allowance of **120** movements per day during the **4** "Special Public Flying Events".

Drafting of Conditions / Additional Conditions

The drafting of the two varied conditions raises some immediate concerns. Condition 13 retains the requirement for the "Special Public Flying Events" to be organised in accordance with a scheme to be submitted to and approved in writing by the LPA. This has always been a flawed part of the condition and gives no indication of the scope of any such scheme, the criteria for approval, the timing and mechanism for any submission, the role of public consultation, the resourcing of the LPA consideration or the consequences of the LPA not giving approval. It also loses the existing requirement for transport planning although this could presumably be built into any requirement for approval of the event scheme. Condition 14 also provides for the 120 movements permitted for a

Special Public Flying Event to be varied if agreed in writing with the LPA. Again, there is no indication of how such an agreement might function and the implications of the LPA either increasing or reducing the quota or refusing to do so. **It is recommended that the above issues are dealt with as part of any approval by means of condition or legal agreement.**

When considering the 2016 application two additional conditions were proposed to ensure the effectiveness of what is now the proposed conditions 13 and 14:

- i. A record of all flying activity and aircraft based at the site shall be maintained by the airfield operator and made available in a suitable format for inspection and copying by the Local Planning Authority at any reasonable time. Such record shall as a minimum contain dates, times, aircraft type, description of activity including runway in use and details of any public complaint associated with the activity.
- ii. On the first anniversary of this approval and every two years thereafter, the applicant shall demonstrate to the satisfaction of the Local Planning Authority using actual flight records that the LOAEL of 50dB LAeq 12hr has not been exceeded at any property in the vicinity of the airfield except on "Special Public Flying Events". In the event that an exceedance is identified the applicant shall prepare and implement a noise reduction plan to further control the number and or type of aircraft using the airfield such that the 50dB LAeq 12hr is not exceeded at any noise sensitive property.

It is recommended that the above conditions be added for the effective operation of any new approval.

Residual Conditions

A number of the current conditions will also have an impact on the control of noise including limiting the number of aircraft based at the airfield and the types of aircraft and flying permitted. To clarify these requirements the attached Table 1 shows all of the conditions that may impact on noise and include the variations proposed in the 2016 application for comparison. It should be noted that in this table conditions have been paraphrased to simplify understanding and comparison and that it is necessary to revert to the original documents for the precise wording.

Noise Impact Assessment

The application is accompanied by a Noise Impact Assessment prepared by the applicants' acoustic consultants Sharps Gayler LLP. This is a rework of the 2016 report to reflect the smaller increase in flying activity now required. The proposed variations still represent a significant increase in permitted flying activity compared with the current limitations but are considerably reduced from the requirements of the failed 2016 application.

The noise impact assessment addresses the potential impact of the increased daily movements on the ambient noise levels in the area and concludes that, other than during "Special Public Flying Events", the daily increase would be less than 4dB. This evaluation fails to recognise the current monthly and annual caps but is correct in that on any one day the noise impact from airfield operations will be less than 4dB above existing levels. This will be a noticeable change in the noise climate albeit on the lower boundary of significance, however current policy and practice as discussed later in the Sharps Gayler report is to consider the impact in terms of absolute levels, particularly when levels are less than the lowest observed adverse effect level as discussed below.

As in the 2016 report, section 2 of the Sharps Gayler noise impact assessment usefully sets out the hierarchy of national policy and practice in relation to the assessment of planning noise impact. In particular it explains the concept of “adverse effect levels” and the three-tier approach based on the Lowest Observed Adverse Effect Level (LOAEL) and the Significant Observed Adverse Effect Level (SOAEL), quoting the National Policy Statement and Planning Policy Guidance. These levels will vary depending on the situation under consideration with neither the policy or statutory guidance attempting to prescribe values.

Section 3 of the report follows this by setting out a methodology for calculating the lowest observed adverse effect level (LOAEL) with reference to the much-quoted World Health Organisation “Guidelines for Community Noise” and the National Physical Laboratory’s interpretation of those guidelines. The consultant concludes that the average level (LAeqT) for LOAEL and SOAEL in relation to this development should be 50dB and 60dB respectively. The report points out that this represents the most stringent interpretation of the WHO range of levels and with an added margin of safety in that the average is taken over the shorter operating day of 12 hours rather than the WHO full day of 16 hours. The report further justifies these values by reference to three other studies. As with the previous application this work and the derived LOAEL and SOAEL is not disputed although it should be noted that it is the concept of LOAEL that is set by Government and not the actual value as suggested in the conclusion to the report.

Section 4 of the noise impact assessment goes on to assess the noise emission levels from aircraft movements. The consultant has used the Integrated Noise Model, an industry standard model derived from the United States FAA and which is in common use for airfield noise prediction and produces noise contours for the airfield. MDC does not have access to the model to check the calculations but the system inputs have been checked as far as is possible with the data available and the outputs appear consistent with other airfield noise maps. A number of assumptions are made based on current operating arrangements including the General Flying Orders for the airfield and using data for a Cessna 172 which the consultant argues is the closest published match to the noisiest aircraft currently based at the airfield and is typical of the aircraft types likely to use the airfield. This is an acceptable approach for normal airfield operation but will be less accurate during “Special Public Flying Events”. The model also uses the annual modal split of runway use. This gives a good annual average of the noise contours but as runway use is mainly dependant on wind direction higher daily noise levels will be experienced when a single runway is used for a whole day.

The output from the model demonstrates that the proposed LOAEL of 50dB is not exceeded at any noise sensitive property at 30 movements per day, and by a comfortable margin. The output is also validated by reference to measurements taken in March 2017 in support of the 2016 application. Applying the PPG-N guidance, it can be concluded that no specific measures are required to manage the acoustic environment at these levels and as with the 2016 application **there is no environmental health objection to this level of flying activity.**

The report repeats the assessment for the 8 “Special Public Flying Events” with 120 permitted movements per day. Again, it concludes that this level of activity could be contained within the LOAEL threshold of 50dB. **This approach is flawed on two accounts.** Firstly, the Cessna 172 data used as a surrogate for aircraft based at Stow Maries may not be typical of the visiting aircraft during a special public flying event. Secondly, the modal split of runway use is not appropriate for a short-term evaluation of noise impact. Runways 20 and 02 appear to be preferred due to their length, prevailing wind direction and absence of obstruction on approach. Unless wind conditions change considerably during a special public flying event there is a high likelihood of all movements using a

single runway, most likely 20 but potentially 02. This would give a directional focus the noise impact which cannot be averaged in the same way as normal airfield operation.

Without knowing how visiting aircraft types compare to the modelled data and without modelling all movements on a single runway it is not possible to accurately determine the noise impact from "Special Public Flying Events". The consultant's model shows that 120 movements will approach the SOAEL of 50dB at Edwins Hall and Flambirds Farm. Given the two points discussed above there is a likelihood that the SOAEL is exceeded for at least some of the 8 "Special Public Flying Events".

Applying the PPG-N guidance, it can therefore be concluded that reasonable steps are required to manage the acoustic environment in relation to special public event flying days. These steps could be the proposed restriction or include a further reduction in movements or control over number and duration of events. Due to the lack of noise data this then becomes a subjective judgement as to what might be a reasonable compromise – balancing short term impact on the local community with the cultural and economic benefits of the development. On that basis the proposal for 4 two-day events does not seem unreasonable although it is likely to give rise to objections, particularly given that events are likely to be in the summer months.

In considering control of noise from "Special Public Flying Events" it should be noted that there will be additional noise from display aircraft. In particular, objectors have previously focussed on noise from aerobatics. Planning controls do not extend to aircraft once in the air or to visiting or overflying aircraft that do not land at the airfield. However, the Civil Aviation Authority places tight controls on air displays through CAP403. These controls include significant restrictions on the number of display items making displays of more than a few hours very unlikely.

Conclusion

The applicant has successfully demonstrated that increasing flying activity to 30 movements per day with an annual cap of 4,200 movements will not result in noise levels that require additional planning controls. Furthermore, existing conditions controlling the number of aircraft based at the airfield, types of aircraft and types of flying activity will help to minimise the increase in absolute sound levels.

There is less certainty over the approach to "Special Public Flying Events". The balance of probability is that these do warrant some form of planning control to put in place reasonable measures to mitigate the noise impact on the local area. Uncertainty around what visiting aircraft might attend the events and runway use prevent an objective recommendation on what might be reasonable. This becomes a subjective judgement which should balance the relatively short-term potential for noise against the economic and cultural benefits.

The current drafting of the two new conditions raises concerns in relation to the effective operation and enforcement of the condition. It is therefore essential that the uncertainties around LPA prior approval or variation of flight quota are resolved as part of any approval. Additionally two further conditions are proposed to ensure the effective monitoring and enforcement of both the existing and the two varied conditions.

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04 November 2017

Table 1 **17/01071/FUL Stow Maries Great War Airfield Comparison of Planning Conditions**

	FUL/MAL/09/00250 (Current)	FUL/MAL/16/1142 (Refused)	FUL/MAL/17/01071/FUL (New)
Maximum Flight Movements	(Condition 14) 12 movements per day 74 movements per month Overall cap of 360 movements per annum (provision for LPA to vary for public events)	(Condition 8) 25 landings and 25 take offs per day Nov-Apr (Condition 9) 25 landings and 25 take offs per weekday May-Oct (Condition 10) 50 landings and 50 take offs per weekend day and bank holidays May-Oct (Condition 11) 75 landings and 75 take offs per day during special flying events subject to an overall cap of 300 landings and 300 take offs per event (Condition 17) Overall cap of 8000 per annum (Condition 17)	(Revised condition 14) 30 movements per day 120 movements at up to 4 "Special Public Flying Events" (subject to agreement with LPA) Overall cap of 4200 per annum
Public Events	(Condition 13) 2 Public Events per annum Maximum duration 3 days Organised in accordance with a scheme submitted to and approved by the LPA Plan to include travel and park and ride	(Condition 11) 4 special flying events held May-Oct Maximum duration 3 days	(Revised condition 13) 4 "Special Public Flying Events" per annum Maximum duration 2 days Organised in accordance with a scheme submitted to and approved by the LPA
Maximum Flightworthy Aircraft Based at Airfield	15 (Condition 8)	15	15 (Original Condition 8)
Type of Flying Activity and Aircraft Using the Airfield	Fixed wing, single propeller (Condition 9) No helicopters (except in emergency), microlights, gliders or hot air balloons (Condition 10)	Fixed wing (single) propeller (Condition 6) No gliders or helicopters (except emergency service or military aircraft), unless an emergency or special flying event day	Fixed wing, single propeller (Original Condition 9) No helicopters (except in emergency), microlights, gliders or hot air balloons

	<p>No flying school activities or training flights (Condition 12)</p> <p>No charter or fare paying flights (Condition 15)</p>	<p>(Condition 6)</p> <p>No flying school <u>flying</u> activities or training flights (Condition 14)</p> <p>No charter or fare paying flights (Condition 15)</p> <p>Aerobatics only permitted on special flying events and with CAA approval (Condition 13)</p>	<p>Condition 10)</p> <p>No flying school activities or training flights (Original Condition 12)</p> <p>No charter or fare paying flights (Original Condition 15)</p>
Flying Hours	<p>08:00 to earliest of sunset or 20:00 Oct-March</p> <p>08:00 to 20:00 Apr-Sept (Condition 11)</p>	<p>08:00 to earliest of sunset or 20:00 (Condition 7)</p>	<p>08:00 to earliest of sunset or 20:00 Oct-March</p> <p>08:00 to 20:00 Apr-Sept (Original Condition 11)</p>
Record Keeping and Noise Monitoring	No requirement	<p>Records maintained of all flying activity and aircraft based at the site. Made available in suitable format for inspection and copying by LPA at any time. To include as a minimum dates, times, description of activity, aircraft type and details of any public complaint (Condition 12)</p> <p>On first anniversary of approval and every two years thereafter demonstrate using actual flight records that LOAEL of 50dB LAeq 12 hour is not exceeded except during special flying events.</p> <p>Noise reduction plan and measures to deal with exceedances (Condition 16)</p>	No requirement

