

# Farnborough Airport Area Action Plan

## Sustainability Appraisal Scoping Report: Consultation Feedback

James Radley (January 2009)

This document is in response to Rushmoor Borough Council's Sustainability Appraisal Scoping Report for their Farnborough Airport AAP. This document provides responses to the individual questions specifically raised within that document. Some general comments are also made.

### **Summary**

I welcome the proposed objective on noise identified within the table in para 2.3.1;  
*Noise: To reduce the proportion of the community adversely affected by noise disturbance from aircraft*

Unfortunately as I shall explain in later sections the scoping report appears to lose sight of this laudable objective.

### **Population**

*Do you agree that there are no environmental and sustainability problems associated with population? Can you suggest any SA/SEA objectives that you feel should be included?*

Actually I disagree that the scoping report should rule out population as being a matter on which there are no potential environmental and sustainability problems.

As the scoping report correctly points out in paras. 4.3.2 & 3 Rushmoor has a much higher than average population density at 2,320 people per km<sup>2</sup> (2001). It is also predicted that the population will be increasing in future years. Given Rushmoor's restricted capacity to expand beyond the boundaries of the existing settlements then this can only further increase population density.

Given that any expansion of operations at Farnborough would arguably have an impact on the surrounding population through noise, air quality, and 3<sup>rd</sup> party risk (as examples) then population should be considered in the context of formulating this AAP. It is extremely likely that an expansion of the local population will have sustainability impacts in relation to operations at Farnborough and vice versa.

There is certainly an argument that expanding an airport in an area of such high population density should be avoided; especially as there are alternatives. Therefore this issue must be considered as part of the preparation of the AAP – so that it can be fully explored. If subsequently RBC feels able to dismiss population as a concern then this can then be fully explained. The consideration of population density is very relevant to the consideration of 3<sup>rd</sup> party risk which must be part of the Cost Benefit Analysis for any proposal to allow expansion of the airport.

The AAP should also address why, if as stated in para 4.3.4 “a growing imbalance between the number of jobs and the number of workers in Rushmoor with employment increasing faster than population”, growth at Farnborough is deemed to be necessary.

## **Health**

*Do you agree that there are no environmental and sustainability problems associated with health? Can you suggest any SA/SEA objectives that you feel should be included?*

Given the potential impacts on health due to stress caused by noise annoyance and the potential increase in particulates (see section on air quality) then it would be unreasonable to rule out health issues at this stage.

There is a growing incidence of asthma in the Borough and this condition is often associated with an increase in air borne particulates. Aircraft are known to be more problematical in terms of generating particulate pollution than they are for generating NO<sub>x</sub>.

## **Economy, Employment and Skills**

*Do you agree that the environmental and sustainability problems identified reflect the economic issues which affect the AAP area? Are you aware of any further environmental and sustainability problems that we have not identified? Do you agree with the proposed SA/SEA objectives and if not what objectives do you suggest?*

I believe that this scoping report has failed to correctly understand the cause and effect between the existence of a sizeable "knowledge pool" and the presence of knowledge based industries in and around the Borough.

Knowledge based companies setup along the M3 corridor primarily because of the ease of access to London and particularly Heathrow long before Farnborough Airport allowed any business traffic. The cluster of knowledge based industries focused around Farnborough occurred because of the coincidence of being a reasonable commute to London & Heathrow and an existing highly skilled indigenous population that had already been attracted to the area by the various defense research establishments.

These conditions remain today and are not influenced to any great extent by Farnborough being a Business Aviation airport. The list of companies reputed to use Farnborough Aerodrome (table 6.2) primarily fly their staff around on scheduled commercial flights and chose to come to this area because of the aforementioned attractors and not because of the existence of Farnborough Airport.

Contrary to the fear expressed in para. 6.5.2; if any one knowledge based company were to fail it should, in a stable economy, be reasonably expected that another would move in to take its place (due to the availability of professional and skilled personnel). What should concern RBC more is the imbalance of skilled workers (para. 7.3.11) actually living in their Borough to those who commute in for work. Frankly increasing activity at the aerodrome is unlikely to make Rushmoor any more an attractive a place to live.

## **Crime & Safety**

*Do you agree that the environmental and sustainability problem identified reflects the crime and safety issues that affect the AAP area? If not, can you suggest any further issues? Do you agree with the proposed SA/SEA objective and if not what objectives do you suggest?*

This document repeats the perennial misunderstanding that Rushmoor have over Public Safety, Third Party Risk and Public Safety Zones. It is critically important that when developing the AAP that RBC fully evaluates the third party risk associated with any expansion and quantifies this in order to undertake a fully informed Cost Benefit Analysis.

Only, if having found through such analysis that the benefits of allowing expansion outweigh the risks can Rushmoor proceed to recommend a growth in air traffic. This will require that Rushmoor equates the economic benefit against the perceived value of any human lives that it can statistically be expected to be lost due to an air crash resulting from activity at the aerodrome.

If then, and only then Rushmoor feel able to recommend allowing expansion in the number of movements will it be relevant to request that the DfT produces a PSZ for the increased activity. The PSZ is a device that informs the subsequent planning process in relation to the area within the PSZ – it does not inform the planning process in relation to the aerodrome itself. A fundamental point which Rushmoor it seems fails to grasp.

The existing PSZ is of relevance however, because as pointed out in para. 9.3.3 the model of calculating the PSZ has recently changed. The clear implication of para 9.3.3 is that the current PSZ for 28,000 movements has shrunk. This is of great economic benefit to any householder whose property will have now escaped the PSZ and is no-longer blighted by the planning restrictions which would otherwise have been imposed upon it.

RBC has an obligation of duty to request that the DfT releases the new 28k PSZ contour and informs residents that have been released from it. By RBC's own admission (para 9.3.3) the 28k PSZ has shrunk.

If RBC wishes to recommend an AAP which subsequently increases the size of the PSZ again, perhaps to accommodate annual flying at a level of 50k movements – then this will be an issue which would need to be considered at the appropriate time; which according to PSZ policy is not now.

## **Housing**

*Do you agree that housing is not a particular issue for the AAP area and that it is not necessary to have a SA/SEA objective that focuses specifically on housing?  
Can you suggest any SA/SEA objectives that you feel should be included?*

The impact of any proposed growth in aircraft numbers should be evaluated against projected housing growth to ensure that there are no conflicts – it would be unreasonable not to evaluate the interrelationship of housing to the Aerodrome.

## **Climate**

*Do you agree that the environmental and sustainability problems identified reflect the issues that affect the AAP area? Do you have any further suggested problems which you feel should be included? Do you have any comments to make on the proposed SA/SEA objectives or have any further SA/SEA objectives to suggest?*

It is important that we make air travel as efficient as possible in terms of the burning of fossil fuels. Although there are those in the oil industry who dispute that there is a proven link between the burning of fossil fuels and global warming it would be unwise to ignore the possibility and we should be attempting to reduce the global carbon footprint as a precautionary measure. Even if there was no link to global warming; fossil fuels are a finite resource and we should be proactive in ensuring that they are used to the most effect.

Smaller jets such as those used for business aviation are considerably less fuel efficient than the larger commercial airliners when measured in fuel burnt per passenger mile. A number of physical factors have a part in determining how efficient an aircraft is. Aviation fuel is burnt to generate thrust. A powered aircraft requires thrust to provide lift and to overcome drag. The lift generated by a wing is disproportionately greater the larger the dimensions of the wing and the drag of an aircraft is disproportionately lower the larger it is when measured against seating capacity. Consequently, from an aerodynamic standpoint, larger commercial jets seating 250 or more passengers are much more fuel efficient per passenger mile than the smaller ones. Additional factors such as the better fuel efficiency that can be achieved with larger jet engines and the higher passenger density of a commercial airliner make commercial flights considerably more fuel efficient than those in the business aviation sector. Consequently the carbon footprint of a passenger in a business jet will be many times greater than that of a passenger travelling on a commercial airliner.

The Scoping Document is therefore negligent in not comparing the CO<sub>2</sub> emissions per passenger mile of commercial scheduled flights to those operating out of Farnborough. If Rushmoor is serious about reducing the impact of climate change then it must take account of such a comparison.

## **Air Quality**

*Are you able to provide any more up to date sources of information from that which has been included in the baseline section? Do you agree with the environmental and sustainability problem which has been identified and the SA/SEA objective which is proposed? If not please suggest how these could be amended or provide alternatives.*

The Scoping Document refers to the issue with NO<sub>x</sub> (Nitric Oxides; NO & NO<sub>2</sub>) on the M3, but fails to give due consideration to the real air quality issues associated with aviation, namely;

- un-burnt fuel - both discharged as droplets & aerosol exhaust
- particulates (a common cause of asthma)

The Scoping Document needs to ensure that all aspects of air quality are considered not just NO<sub>x</sub>.

## Noise

*Are there any additional environmental and/or sustainability problems which you feel are important and which have not been addressed here? If the SA/SEA objective needs to be amended or added to please suggest how you think this should be done.*

In para 16.4.1 it is stated that; "At this level [55dBA Leq] it is anticipated that less than 5% of the community will be 'highly annoyed' by noise disturbance arising from aircraft noise." I would raise two challenges to this;

- Empirical evidence would suggest that Farnborough induces noise annoyance in a far greater number of people than just 5% of the population living within the 55dB contour.
- Every opportunity should be taken to reduce the number of people adversely affected by noise.

That people who live well outside of the 55dBA Leq noise contour report noise annoyance resulting from movements associated with Farnborough is testament to how useless a predictor of the onset of noise annoyance from activities at Farnborough Leq is.

Leq was designed to work at very busy airports such as Heathrow where the Leq noise contours represent the intensity of background drone. An averaging technique does not apply when individual events are the cause of annoyance because each individual event is much louder than the continuous background drone which you get for the same Leq at a busy airport. A good analogy is to consider the example of keeping your hand against a heated metal plate. A constant temperature of 20°C gives an average temperature of 20°C throughout the day. A constant temperature of 10°C with occasional excursions to 70°C can also give an average of 20°C but it is a damn sight more annoying. This is why fundamentally Leq is not a good predictor as to the onset of noise annoyance at Farnborough.

There is another factor which relates to the number of events within a particular period. While there is only a few events within a particular time period then an individual will subliminally register each event – but will not be annoyed. However, once the individual's personal threshold gets breached then each subsequent event is registered and may very well be a source of annoyance. This physiological effect was demonstrated at the start of TAG's Quiet Flying Programme (QFP) when more flights were funneled over a small area. Many more people who never previously had experienced noise annoyance started to register annoyance. An increase to 50k movements would cause noise annoyance in yet more people (those whose awareness threshold was not breached at 28k movements but is at 50k).

If more flights are to be allowed then one way to mitigate this effect would be to spread flights across a wider area to keep the number of discrete events experienced by any one individual down to a minimum. This approach would potentially have a very real benefit in mitigating the impact of noise annoyance. TAG should at least trial such a technique to spread the impact of any expansion in a controlled and fair way.

Para 16.5.2 of the Scoping Report points to the expectation that aircraft will become quieter in the future. The benefit of such a reduction in noise from aircraft should be used to also benefit affected residents, not just as a means to increase the number of

movements that can happen within the same noise contour. This would then be consistent with the stated noise objective under para 2.3.1

### ***Maps***

It is worth making clear that although the AAP is bounded to consider development within the area outlined, the impact of any development far beyond this boundary does need to be considered.

It would be worth extending the boundary of the AAP to include the Technical College, because arguably if the AAP was to propose measures which excessively blighted the Technical College it would be necessary to relocate it. Hence, the use of the Technical College site is tightly coupled to this AAP and should be considered in this context.