

# C/M/S/ Cameron McKenna

Planning Central Casework Division  
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**FAO: Mr Michael Taylor**

Your Ref: APP/C1570/A/06/2032278  
Our Ref: ASW/CJCW/MIT4.09a/002268.00423

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**18 February 2008**  
**By email and post**  
**michael.taylor@communities.gsi.**  
**gov.uk**

Dear Sir

**Our Clients: BAA Ltd and Stansted Airport Ltd**  
**Town and Country Planning Act 1990 - Section 78**  
**Appeal made by BAA Ltd and Stansted Airport Ltd against the decision of Uttlesford District Council**  
**Land at Stansted Airport, Stansted, Essex CM24 1QW**

We refer to the letter of 21<sup>st</sup> January of this year from the Department of Communities and Local Government (from M Guthrie) advising that the Inspector's Report of the G1 Planning Inquiry had been received within the Planning Central Casework Division.

We are writing to you to bring to your attention a matter that we believe should be considered by the Secretaries of State before a Decision is made on the G1 Inquiry Inspector's Report and Recommendations. We have copied this letter to the other Rule 6 Parties at the G1 Inquiry.

The matter which we wish to bring to the attention of the Secretaries of State relates to an aspect of the air quality modelling that was used to predict the likely effects of the proposed G1 development on concentrations of NO<sub>x</sub> in the vicinity of the airport.

### Air Quality Modelling and NO<sub>x</sub> Emissions

The air quality modelling undertaken on behalf of BAA and considered in the G1 Inquiry comprised two elements:

- (1) what is known as 'explicit modelling' for road and airport emission sources; and
- (2) background modelling, i.e. all other emission sources.

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The road and airport emissions used in the modelling process were quantified from activity data - road traffic flows and aircraft movements. Background emission sources were based on Defra background concentration maps, but only after removing the emission sources that were explicitly modelled. This avoids double counting of emissions. The activity and background mapping data corresponded to the same seven month period in 2003/04.

Concentrations from the two modelling components were then combined to give the total concentrations across the G1 study area (the G1 study area is defined in page 4, paragraph 5.1.4 and Figure 1 of Volume 3 of the Environmental Statement accompanying the G1 application, G1 Inquiry Core Document 6). The performance of this combined model was compared with monitoring data in a model test for a seven month period in 2003/04. The explicitly modelled concentrations together with background concentrations were concluded to be in good agreement with the measured results obtained for the same period from a monitoring station close to the airport (Stansted 3 (High House) OS grid reference 555925, 223345). Comparison at two more distant background sites showed that the model performed within the expected range ( $\pm 30\%$ ) found in the Defra background methodology when compared to the measured values.

The outcome of that modelling exercise was therefore used to predict the likely concentrations of  $\text{NO}_x$  both with and without the proposed G1 development (referred to as the '35mppa case' and the '25mppa case' respectively). The model predicted that in both cases the concentration of  $\text{NO}_x$  would not exceed  $30 \mu\text{g}/\text{m}^3$  within Hatfield Forest, with the relevant contour just skirting the northwest corner of the Forest, and would not exceed  $30 \mu\text{g}/\text{m}^3$  within Eastend Wood (see Figures 4 and 8 in Volume 3 of the Environmental Statement accompanying the G1 Application, and those Figures are enclosed for ease of reference).

### Air Quality Modelling tests carried out in 2008

As part of the air quality assessment that has recently been carried out as part of the preparation of the Environmental Statement that will in due course support the Planning Application for the proposed new runway at Stansted Airport (a project that we refer to as 'G2'), a model test was again undertaken to compare the performance of the explicit and background models over a 12 month period (2006/07) against monitoring data. During the completion of this model test work by BAA's consultants at the end of January 2008, it became evident that the Defra background mapping concentrations over the 2006/07 period were lower than the measured concentrations at background sites in the study area over the same period. The magnitude of this difference is equivalent to about 20% of the 'Defra background' (i.e. as published). This is equivalent to about 40% when applied to the 'model test background' (i.e. after the removal of the contributions from the explicitly modelled sources). The difference was similar at each of the three background sites. Given that it represents an underestimation of concentrations, for the purposes of the G2 assessment BAA's consultants have advised that this difference should be treated as a systematic under-prediction that would be expected to affect predicted concentrations in other years.

### Comparison of G2 and G1 Air Quality Assessments

If the G1 Air Quality modelling results were updated to be consistent with the adjusted background concentration data, it would have the effect of increasing the  $\text{NO}_x$  concentrations in both the 35 mppa and 25 mppa cases. The  $30 \mu\text{g}/\text{m}^3$  concentration contours for the 35mppa and 25mppa cases would then extend into Hatfield Forest in both cases (rather than skirting the edge of the Forest) by up to about 250 metres and 150 metres respectively. The contour would also extend into Eastend Wood by up to about 185 metres and 10 metres respectively.

## The updated contour maps

As the findings of the model test work have an effect on the location of the  $30 \mu\text{g}/\text{m}^3$   $\text{NO}_x$  concentration contours, BAA has prepared new contour maps for the 25 mppa and 35 mppa cases in 2014 which are also enclosed with this letter. These contour maps update Figures 4 and 8 of Volume 3 of the Environmental Statement accompanying the G1 Application to reflect the very latest information. The updated contours would consequently lead to a different conclusion from that expressed in the 3<sup>rd</sup> sentence of paragraph 10.2.37 in Volume 3 of the Environmental Statement accompanying the G1 Application – to the effect that the  $30 \mu\text{g}/\text{m}^3$   $\text{NO}_x$  contour is now predicted to extend into Hatfield Forest and Eastend Wood in both cases. It is important to understand that this change to the  $30 \mu\text{g}/\text{m}^3$  contour is a result of updating the background emissions only (i.e. those non-explicitly modelled emissions) and not any change in the forecasts of the explicitly modelled road and airport emissions.

## Closing Submissions heard by the Inspector at the G1 Inquiry

BAA's case at the G1 Inquiry was, and remains, that the likely impact of the G1 proposals on the concentrations of  $\text{NO}_x$  in Hatfield Forest would not be such as to justify the refusal of planning permission. This remains BAA's case in the light of the new information referred to in this letter, which does not affect the basic position put forward on BAA's behalf at the G1 inquiry, namely:

*"... the likely impact of the G1 proposals on the levels of  $\text{NO}_x$  in Hatfield Forest would not be such as to justify the refusal of planning permission"* (BAA's Closing Submissions, page 204, paragraph 651).

Those parts of BAA's Closing Submissions on this issue that were made in reliance on the contours as they were predicted at the time of the inquiry must now be read in the light of the updated contours. That, however, does not affect the ultimate conclusion articulated in BAA's Closing Submissions.

BAA's Closing Submissions explicitly addressed the possibility that concentrations of  $\text{NO}_x$  in Hatfield Forest might exceed  $30 \mu\text{g}/\text{m}^3$ , and made clear why that would in no sense justify the refusal of planning permission for this nationally important infrastructure project. The principal reasons for that submission are to be found in the following paragraphs of BAA's Closing Submissions: 558-561, 566-584, 609-611, 613i-v, 630-633. The closing submissions that BAA made on these points can briefly be summarised as follows:

- i. There is neither a legal requirement, nor a policy objective, to achieve a concentration below  $30 \mu\text{g}/\text{m}^3$  in Hatfield Forest.
- ii.  $\text{NO}_x$  concentrations in Hatfield Forest are steadily improving and will be lower by 2014/15 (with or without G1) than they are at present.
- iii. Whatever the actual concentration may turn out to be in 2014/15, the difference that the proposed development would make to those concentrations is not controversial. In effect, it would result in a slight reduction in the rate at which the concentration is expected to improve in future years.
- iv. A concentration of  $\text{NO}_x$  above  $30 \mu\text{g}/\text{m}^3$  cannot be taken as a proxy for likely harm. It is not a threshold, and it cannot be concluded that if the concentration is exceeded it is likely that there would be damage to vegetation in Hatfield Forest. There is no evidence to show that harm is or is likely to be occurring at present.

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- v. No party called any evidence to explain the likely effect on vegetation as a result of the proposed development, or to seek to demonstrate that the difference between the 25 mppa and 35 mppa cases would be likely to have any demonstrable impact on the vegetation in Hatfield Forest.

BAA acknowledges that it would be appropriate for the other Rule 6 Parties to have a reasonable opportunity to make such additional representations as they see fit in respect of the updated NO<sub>x</sub> contours attached to this letter. We note in this context that the consequences of predicted NO<sub>x</sub> concentrations in Hatfield Forest in excess of 30 µg/m<sup>3</sup> were extensively considered and debated at the G1 inquiry.

UDC's Closing Submissions articulated its case that the model was under-predicting by about 6 µg/m<sup>3</sup>, and the effect this would have on concentrations in Hatfield Forest (UDC Closing Submissions, paragraphs 96, 98 and 99).

The National Trust's Closing Submissions rejected BAA's modelled results entirely, and said that because of the criticisms it raised, no definitive conclusions can be drawn in relation to absolute concentrations (NT Closing Submissions, paragraph 7.8). Its submissions did however seek to address the possible consequences of high concentrations of NO<sub>x</sub> in Hatfield Forest (NT Closing Submissions, paragraph 7.5).

Stop Stansted Expansion's Closing Submissions explicitly contemplated and addressed a situation where the 30 µg/m<sup>3</sup> contour encroached into Hatfield Forest (SSE Closing Submissions, paragraphs 21.19 and 21.21-21.22).

In order to enable this matter to be resolved efficiently and fairly to other Parties, we respectfully suggest that the other Rule 6 parties should have an appropriate period to make any additional representations to the Secretaries of State on this discrete point. BAA would then need to be given an opportunity to respond to any representations received.

We assume that the Secretaries of State have sufficient information at this stage to consider for themselves the issue set out in this letter but should any further information be required then you should not hesitate to contact Alistair Watson of this firm.

Yours faithfully



**CMS Cameron McKenna LLP**

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