HILLINGDON
LONDON

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Ref: **Cranford Agreement/Clarification of Details**
Date: **16 August 2013**

Dear Stephen

CLARIFICATION OF ENVIRONMENTAL IMPACT ASSESSMENT INFORMATION ENABLING WORKS FOR THE IMPLEMENTATION OF FULL RUNWAY ALTERNATION (ENDING THE CRANFORD AGREEMENT)

I am writing to you with matters for clarification as set out in our recent meeting of 23 July 2013 regarding the above proposals.

As discussed at the meeting the Council still has a number of concerns about the methodology used to assess the impacts of the development and ultimately the ending of the Cranford Agreement. However, prior to formulating a final decision the Council would appreciate further clarification on several aspects of the assessment.

1 Cumulative Impacts

The operational changes brought about by the Cranford Agreement are just one of a number of proposals being put forward by the airport, although the only subject to planning considerations. The Infrastructure Planning Commission's advice on cumulative assessments is that they should consider proposals that are 'submitted but not yet approved.'

Alongside the planning application for the enabling works, Heathrow Airport Limited has submitted a range of other proposals to the Davies Commission. These have been

grouped under the submission titled '*Proposals for making the best use of existing capacity in the short and medium terms*' [17 May 2013]. In standard planning practices, a submission in response to a policy framework consultation would not normally be covered by a cumulative impact assessment largely because it is part of a two tier assessment process i.e. it gets assessed prior to be included within a policy framework, and then gets a further assessment prior to implementation as part of a planning application. It would therefore be inappropriate for an EIA cumulative assessment to consider a submission to a consultation on a plan or programme.

In this case, there does not appear to be a second tier of assessment. In effect the submission to the Davies Commission is a request for permission to change the operation of the airport. There does not appear to be a future round of consultation given the proposals are removed from the planning process. Furthermore, there does not appear to be a formal or robust appraisal process, as with planning applications, to determine the effects of the proposed operational changes.

Ultimately then, it is highly possible that if the current enabling works were approved, they would then be combined with future operations relating to ending westerly preferences, measures outlined in the operational freedoms trial and several others (including earlier morning flights). Whilst ending the Cranford Agreement is assessed, the other measures proposed could be implemented without triggering any further assessment.

The Council believes that the other proposed operational changes are captured by the IPC's definition of 'submitted but not yet approved' and should be fully considered within the cumulative impact assessment of the current EIA.

1A Please clarify how you foresee these proposed operational changes being progressed and how they will be properly assessed before implementation.

2 Baseline year

The Council is still unsure why the baseline year is being set for 2015. This results in an extrapolation of existing data to provide the baseline, and then a further extrapolation for future years. Most planning applications assess the current baseline situation regardless of when the final development will be occupied and in full use. The benefit of using an existing baseline is that there is limited uncertainty about the starting point for the assessment. Forecasting a starting position for the baseline introduces assumptions and subjectivity.

2A Please clarify why the baseline position is being taken from modelled information and not assessments and surveys of the current situation.

3 Noise Assessment Methodology

3.1 Use of Metrics

The noise assessment is based on the LAeq 16hr and is set against a 57dB limit. This is considered to be a significantly outdated form of noise assessment. Accordingly it presents a distorted image of the true impacts of the airport, both before and after the development. This method for noise assessment was questioned during the Terminal 5 inquiry and is not used elsewhere in Europe. As set out in the Council's scoping response, a different and more realistic measure of noise impacts needs to be used. The Environmental Noise Directive should provide the basis for the methodology.

3A Please clarify why the use of the LAeq 16hr 57dB is the preferred method for reaching conclusions on the noise impacts.

3.2 Noise: Assessment of Changes

The ES concludes that significant effects only materialise when there are changes of more than 3dB. This is recognised as being a doubling of noise of exposure. The Council requested that determination of significance should materialise as changes of more than 1dB.

3B Please clarify why the ES is using a change of 3dB to determine whether there is a significant effect.

3.3 Noise: Annoyance Levels

The ES (6.7.34) refers to the European Environment Agency Good Practice Guide on Noise Exposure and Potential Health Effects to provide clarification on where the 'annoyance' terminology used in the assessment has been taken from. However, the assessment of annoyance is not solely linked to an increase of 3dB. Instead, annoyance outlined in the good practice guide is fundamentally linked to Lden measurements. In 6.8.43 of the ES, the use of 'annoyance' criteria is being related to the LAeq 16 hr assessment not Lden and appears to relate solely to a 3dB increase.

3C Please clarify how annoyance has been calculated using the LAeq 16 hr whilst still being linked to the Good Practice Guide

3.4 Noise: Night Time Noise

It is unclear where the night time noise assessment criteria have been derived from. The ES refers to a Lnight assessment but measures significance as being a 3 dB increase over a level of 45dB.

*3D Please clarify the source of the methodology and criteria used to measure nightime noise, and ultimately why this method is used***.**

3.5 General Matters

The contours provided in Appendix G of the ES are of a scale which does not allow easy identification of local authority receptors.

3E Please could you provide noise contours in a GIS format to allow local authorities to assess relevant sensitive receptors.

The text in the chapter 6 (air and ground noise) refers to different modal splits. Reference is made to actual, standard, long term average and assessed mode. It is not clear from the document which modal split has been used in the assessment.

3F Please clarify the east/west split as used for modelling purposes for both air quality and for noise.

The text in paragraph 6.14.4 refers to the noise barrier and the mitigation to be provided in regard to reductions in noise.

3G Please could the evidence behind the assumptions of the noise reduction provided by the noise barrier be provided and the methodology for assessing the effect of the noise barrier be clarified.

Appendix G refers to the schools and community buildings and the assessments used to inform the conclusion that no mitigation is required.

3H Please clarify the rationale behind the conclusion that 'no mitigation is required' be given greater clarity. In particular, please provide clarification on the metric used to reach the conclusion, e.g. has the average or the worse case 30minute LAeq been used to inform the conclusion.

3I Please elaborate on the methodology used for obtaining the correlation between LAeq,30 min and LAeq,16h, in particular how was the relationship established?

There are a number of terms used in the ES that require explanation and description to fully understand the context for their usage.

3J Please clarify the following operational terms:

- *Relief*
- *Respite*
- *Reflective Alternation*

4 Landscape Impacts of Noise Barrier

The Council would appreciate further discussions about the noise barrier. The Council has requested a view point on many occasions showing the extent of the noise barrier from the airport side. This would provide a clear indication of the impacts of the barrier

across its length as opposed to just the viewpoints agreed previously on publicly available land. It is therefore not possible to fully consider the impacts on private residents without the presentation of any visuals showing the barrier in the context of the existing housing.

Furthermore, the Council does not believe it appropriate to have a single span of the same finishing. There are areas along the line of the barrier that would benefit from green screens (vegetation growing up a fence or barrier) as opposed to a transparent Perspex style finish.

4A Please advise on suitable dates, including site visit, to undertake further discussions on the noise barrier.

5 Air Quality

The Council has some queries regarding the source of data used within the Air Quality chapter. Modelling of the air quality impacts at Heathrow has been completed previously as part of the Adding Capacity at Heathrow study. Further modelling appears to have been undertaken for this ES. Finally, monitoring data is available to provide real term air quality impacts.

With regards to modelling data, the information within the Adding Capacity at Heathrow study shows different outputs from that used for the ES as set out in the following table:

	Adding Capacity at Heathrow results for 2015SM	Ending of the Cranford Agreement 2015 ES results
Location	(ug/m3 nitrogen dioxide)	(ug/m3 nitrogen dioxide)
North-west of airport		
Green Gates monitoring station	Increase of 1.3ug/m3 (source apportionment indicated aircraft NOx increase from 5.7ug/m3 to 8.2ug/m3)	Increase of 0.6ug/m3 (no source apportionment breakdown provided)
Longford receptor experiencing largest increase	Increase of 3.9ug/m3 (source apportionment indicated aircraft NOx increase from 5.4ug/m3 to 14.4ug/m3)	Increase of 1.5ug/m3 (no source apportionment breakdown provided)
North-east of airport		
Oxford Avenue monitoring station	Increase of 1ug/m3 (source apportionment indicated aircraft NOx increase from 15ug/m3 to 16.3ug/m3, plus increase in other airport NOx from 1.8ug/m3 to 2.1ug/m3)	No increase indicated (no source apportionment breakdown provided)

Nearby Cranford receptor with largest increase	Increase of 1.3ug/m3 (source apportionment indicated aircraft NOx increase from 17.5ug/m3 to 19.13ug/m3, plus increase in other airport NOx from 1.6ug/m3 to 2.3ug/m3	No increase indicated (receptor 115) (no source apportionment breakdown provided)

The Adding Capacity study indicated significant increases in NO2 due to increased impacts from aircraft NOx. There were additional smaller increases in other airport NOx in receptors to the north east. The ES (Table 7.11) shows the same levels of increases in aircraft NOX but unlike the Adding Capacity study, there are no associated increased in NO2.

5A The Council requires clarification on why there is a substantial change to the modelling outputs used in the two different assessments outlined in the above table. In particular, why does additional Aircraft NOx have an impact on NO2 within the Adding Capacity study, but not in the submitted ES.

Monitoring data is more accurate than modelling data and should always be used where possible. This removes the inherent level of subjectivity that goes into modelling and forecasting. There is a large amount of Air Quality monitoring data available for the areas around the airport. This data appears to have helped develop the 2015 baseline but there are discrepancies between those used in the ES and those presented in the Council's June 2013 Air Quality Action Plan Progress Report. For example:

Monitoring Station	**2013 Enabling Works ES**					**Hillingdon Action Plan Update**				
	08	09	10	11	12	08	09	10	11	12
Heathrow LHR	53	50	50	50	46	53	49.8	49.6	**52**	**47.7**
Heathrow – Oaks Road	35	34	37	30	30	35	33.4	37.2	**39**	30.3
Oxford Avenue	43	42	41	44	43	**42**	**43.4**	41	44	**44.1**
*Numbers in **bold** show discrepancies that could not be attributed to rounding*										

Furthermore, there are some concerns about the descriptive text that attempts to explain some of the changes as result of the development. Paragraph 7.8.23 states:

> *Predicted annual mean NO2 concentrations at the Oaks Road Continuous monitoring station show a 0.8ugm reduction in 2015, with total predicted concentrations falling from 38.1 to 37.3 ugm. One of the residential receptors where annual mean concentrations would exceed 40ugm under the baseline, would no longer exceed under the Project.*

Paragraph 7.8.24 concludes *there would be no receptors moving from exceeding the AQO to not exceeding as a result of the Project.*

The extract from 7.8.24 appears to contradict the findings in 7.8.23. And the data outlined in 7.8.23 does not appear to relate to the tables presented to show the baseline.

5B Please clarify the existing baseline position with regards to the Hillingdon Air Quality Action Plan Update; update table 7.4 to show the baseline used to 2015 (as this is the starting point for the assessment); describe and explain any changes between monitored data from 2008-2012 to those modelled for 2015; finally, provide an update of table 7.4 for the assessment which includes:

- *The name of the monitoring station*
- *The monitoring results up to 2012 to one decimal place where available*
- *The modelled baseline with no project to 2015*
- *The modelled future baseline with no project*
- *The modelled impacts of the project*

It is noted in the text that there has been a sensitivity test carried out in regard to different meteorological years, i.e. 2008/09 (as presented in Table R modelling results) and 2002 (original PSDH year). The text states that the 2002 sensitivity test resulted in decreased concentrations, although the model evaluation report at Appendix J appears to suggest this is more of an issue with receptors to the south of the airport.

Appendix J, Para 3.2.22 states:

> *Largest changes in NO2 concentrations between 2002 and 2008/09 values are at Oaks Road and Hatton Cross where meteorological factors play a significant part in generating changes in NOx concentrations.*

It is not clear how this data relates to other information in the assessment.

5C Please present the 2002 sensitivity test results in line with the tables provided in Appendix R which would allow a comparison between the tests. Please could this be provided along with the grid references of the receptors as it is difficult to identify clustered results.

The north-east receptors are influenced by the airport emissions and road traffic emissions. It is noted within the Project ES (para 7.7.44) that a sensitivity test has been carried out in regard to using a worse case road emissions approach, although it is stated that the road traffic element will not change with the Project in place.

5D For completeness please provide the results from this sensitivity test be provided in line with the tables provided in Appendix R.

If you wish to discuss any of these matters further, please do not hesitate to contact me on the number at the foot of the first page.

Yours sincerely

Ian Thynne
Principal Sustainability Officer