

Thank you for the opportunity to respond to this consultation. This response is submitted by CAIAN (Communities Against Increased Aircraft Noise) which represents a number of residents associations and communities mostly to the west (but not exclusively) of Heathrow.

CAIAN notes that in its initial consultation, the Commission asked eight questions relating to its appraisal of the three options for increasing airport capacity. In the current consultation on air quality assessment, the Commission highlights three of the initial eight questions.

We would like to make the following general comments:

- The Assessment and associated documents make very hard going for non-technical lay people and therefore exclude many individuals and communities who would like to comment on this important matter.
- The opportunity to respond is within a very small time frame which gives insufficient time for adequate study and consideration of the document and addendum.
- We are concerned that a full Assessment of the potential for pollution and impact of reduced Air Quality from airport expansion was not included in the original Davies Report, but is now being assessed in this hastily-produced add on. This would leave us to conclude that Air Quality and the impact on health and the environment is not a primary consideration for the Davies Commission and economic 'benefits' are of greater importance.
- The narrowing of flight paths (e.g. Compton on easterlies which NATS undertook in June 2014) which will continue with the use of PBN technology has the potential to increase the concentration of pollutants over certain areas, particularly those close to the airport. This has not been adequately addressed in the Assessment and is a fundamental failing.

This submission speaks generally about expansion plans (both runway options) at Heathrow and does not differentiate between the two.

Q5: Do you have any comments on how the Commission has carried out its appraisal of specific topics (as defined by the Commission's 16 appraisal modules), including methodology and results?

The Jacobs analysis is very comprehensive but fails to give a technical best/worse/neutral conclusion on the various facts. This is disappointing; it would have been beneficial to make conclusions under each heading. This would also have helped the public to have a better and clearer understanding of the salient issues. The fact that there are no conclusive recommendations would suggest that there are as many arguments against most of the analysis.

Comments such as 'there will be a marginal increase on present high levels' are not quantitative and fail to give a practical example of what the likely effects on the quality of life for local residents would be.

Pollution

Heathrow does not currently meet satisfactory air quality limits. This is before any expansion.

Nitrogen Dioxide levels at the airport are already in breach of the EU Air Quality Directive, (although management blame traffic on the M4).

The unanimous ruling by the UK Supreme Court earlier this year effectively orders the Government to deliver an effective plan for dealing with illegal levels of air pollution in the UK by the end of the year. The Court ruled that "The new Government, whatever its political complexion, should be left in no doubt as to the need for immediate action to address this now,"

Proposed airport expansion at Heathrow would increase the potential for pollutants in the communities and areas affected by expansion at Heathrow.

Unacceptable levels of pollution would affect an additional 47,063 homes and 121,377 people should expansion at Heathrow be allowed.

There should be plans in place to address the current poor air quality situation experienced by the local communities and ensure that the Heathrow zone is fully compliant with European legislation as soon as possible. Until this is done, and the emission reductions fully secured, expansion at Heathrow cannot be considered.

Q6: Do you have any comments on the Commission's sustainability assessments, including methodology and results?

Mitigation

The document talks about unmitigated scenarios, which would further delay Defra in achieving compliance with the limit values – this is a critical issue. There is little in the document about enforcement if mitigation targets are not met and there is little of binding numbers on what the limits will be.

Some of the suggested mitigation measures e.g. taxiing on one engine require compliance from the various airlines using Heathrow. Page 100 refers to 'encouraging' aircraft to have the lowest emissions and use of optimised thrust on takeoff settings. How can such schemes be relied on to succeed? In spite of Heathrow's much publicised attempts at

reducing noise, the Noise League Tables from October - December 2014 demonstrate that the airport has been woefully inadequate in getting airlines to comply.

Technologies

There is an assumption that 98% of aircraft would achieve 98% compliance with CARP/6. A rollover model has been used to assume new engines are introduced every 8 years with improved (but unstated) improvements to NO_x emissions. Latest engine standards do not apply to aircraft already in use and they can remain in service for 40 years. Evidence suggests that nitrogen dioxide emissions from aircraft around Heathrow have not changed significantly since 2000.

There is an over reliance on the benefits to be accrued from future vehicle technologies in reducing tailpipe emissions to help solve the air quality issues in 2030. At this juncture there is insufficient evidence to gain confidence that future reductions in NO_x and NO₂ emissions from, as yet unproven, future vehicle technologies, will be delivered in the real world. The claims should therefore be treated with caution.

Air quality

The recent Supreme Court Judgement on the UK's failure to meet its EU Air Quality obligations has highlighted the importance of securing air quality compliance "as soon as possible".

Heathrow already break air quality levels laid down by the European Community, so "good intent" statements would seem to be worthless. The report also makes clear that tightened NECD targets would be exceeded within the current operations.

Page 6.6.2 states that the promoter has provided no quantitative assessment of the air quality impacts of the Heathrow ENR scheme, so no comparison with this assessment can be made. How can the promoter be permitted not to provide evidence on this fundamentally important matter?

Surface transport

Predicted levels of PCMs on the Bath Road are deemed to be higher than those on the Marylebone Road, measurements should be taken to establish emission levels in other local areas of high concentration around the airport where pollutants from aircraft mix with pollution from roads with high levels of traffic e.g. M25/M4/M3. Heathrow authorities are either unwilling to collect this data or are unwilling to share any information.

The assessment appears to contain no new evidence to indicate that the air quality assessment has been updated to include the impacts on the local road network or that there has been accompanying quantification for the predicted increases in freight associated with the schemes.

Neither have predictions taken into account the position in 2040 and 2050 when Heathrow may have achieved capacity.

The overall conclusion is that imposing additional charges on car users could have a significant impact on car mode share and overall traffic demand. This overlooks the nature of those using the airport: passengers (different itineraries/terminals/timings) would be unlikely to be able to car share; airline crew (different itineraries/travelling in from all over the country) would also be unable to avail themselves of such a scheme.

Health

The assessment demonstrates a limited analysis of the air quality impacts of the shortlisted options, including the local damage to human health. There is an under-estimate of the air quality impact.

Frank Kelly (Professor of Environmental Health says 'Put simply, we know that air pollution shortens life expectancy, reduces lung function and worsens the symptoms of asthma, chronic obstructive pulmonary disease and heart disease.' he goes on to say, 'The contaminants in the air that pose such a significant threat to health are the gases NO₂ and ozone, plus a complex mix of particles known as particulate matter (PM).

An increase in NO₂ and NO_x of over 20% is dismissed as almost irrelevant in the Assessment; the effects on health, as laid out above, from already unacceptable levels in the Heathrow vicinity is completely overlooked. The same applies to PM.

The document talks about monetisation of health and environmental impacts: you cannot put value against these two things. Heathrow is already at unacceptable pollution levels and to monetise increased negative impacts is, in our view, totally inappropriate. I would ask what value for a "life year" would be acceptable to the Commission?

Q7 Question 7

Do you have any comments on the Commission's business case, including methodology and results?

Surface transport

A key assumption is that the schemes will generate no growth in airport-related traffic. Additional traffic on the local road network and nearby motorways (M4, M3, M25) from passenger and freight transportation is not addressed. This completely overlooks increases in freight transportation that airport expansion would inevitably bring.

John Holland-Kaye cites one of the benefits of Heathrow expansion as the creation of up to 180,000 jobs. Vast numbers of additional workers will only serve to increase traffic in the local areas and on the approaches to Heathrow. This has been overlooked.

The view expressed is that a minimum of 30 to 35% more people will use public transport to travel to Heathrow is hopelessly optimistic. We would challenge this assertion. Although

congestion zones and low emission areas, as mitigation, might form the basis of a notion to address this, without suitable transport alternatives this is not viable. Talk of using train links to Heathrow via Staines - increasing the use of an overland line that causes considerable disruption to local traffic when level crossings are down is not feasible.

Surface transport forecast of a 60% increase in ULEVs would appear highly optimistic. Supporting technological developments of aircraft and road transport would appear unrealistic. We do not think this is based on factual evidence but by forecasts made by biased industries. We therefore believe that these “technical development” forecasts should be discounted by a minimum of 50%.

Mitigation

Proposed mitigation for Heathrow in respect of local roads and public transport have not been assessed at an adequate level. These should be assessed not only in terms of the costs of such schemes but also other potential impacts such as effects on the local economy. These should be evaluated and costed before any decision is made as to which is the most appropriate location for airport expansion.

Mitigation schemes by Heathrow – things like encouraging airlines to shut down an engine during taxiing, the use of the extended runway to allow a proportion of the take-off emissions to be well away from the airport boundary and the introduction of congestion charging in the area - have not been adequately analysed. Rather there is an assumption that, with some mitigation, the levels will be below the EU legal limits in 2030.

The assessment identifies that by 2030 there will be a problem in small areas close to the Bath Road (very close to the airport) if no mitigation measures have been put in place. The problem would be a little worse from the Heathrow Hub scheme than with the Heathrow Airport 3rd runway scheme but the assessment expects it to be solved in a few years.

The assessment bases future pollution levels in year 2030. Any new runway will not be running to 100% capacity by 2030. The report does not look at what air pollution levels will be in 2040 or 2050 or when running to capacity. It implies that with mitigation measures in place and, as aircraft become cleaner as the years go by, there should not be a problem. But no detailed work has been done on this. Basing future levels on the hope of cleaner aircraft, cleaner vehicles and improved technologies is wildly optimistic.

Summary

The assessment does not therefore present the full implications that the options to expand Heathrow could bring and it therefore potentially underestimates the air quality impacts of the expansion.

In summary, we can not support Heathrow expansion, and we think that the analysis, detailed as it is, has obfuscated the fundamental outcomes by over provision of data but lacking in conclusions and acknowledgment of plain realities.