

# Luton Airport 19 mppa Application Noise Clarifications

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## 1. Introduction

This document provides clarifications in respect of the comments and queries raised in relation to the updated noise assessment (41431RR20V3NA) submitted in May 2021 for the Luton Airport 19 mppa application originally submitted in January 2021. The noise queries collated below have been raised by the following:

- David Gurtler 'DG' (on behalf of Luton Borough Council)
- Vernon Cole 'VC' (Suono Consultancy Limited)
- Andrew Lambourne 'AL' (LADACAN community group).

As there is overlap between the different responders and partial duplication of comments, the clarifications have been consolidated into the main areas of query. For the avoidance of doubt, this document has been provided for clarification purposes only.

## 2. Forecasting

### Technical Queries

- **VC** - *The year-on-year operating forecasts used for the noise modelling seem to take no account of the effects of the Covid pandemic. It is not credible that operating numbers used for noise modelling in 2019, 2021 and 2022 are the same (with reference to the 2019 / 2020 data in the 2020 ES and the 2021 data in Appendix 8B data in the updated Chapter 8). Further clarity is required on this issue so that the timescale over which the forecast changes in movements and noise levels can be defined with confidence.*
- **DG** - *It also does not appear credible to have 2021 as the 'worse case year', and that the forecasts have not been amended since the ES was prepared to reflect the impact of the Covid-19 pandemic. This needs to be addressed as it has implications for the period in which LLAOL is seeking to breach the current condition, for instance the worst case years may be 2022 and 2023, but that slippage could mean that 2028 is not the year by which LLAOL get back to existing contours and 2031 may not be the year that the reduced contours are achieved.*

### Wood response:

The data used in the fleet mix forecast comes from the fleet renewal data published by the airlines together with the actual noise results, and we are confident that the forecast data is accurate. The forecast utilised in the planning application used 2019 actual operations as a base. The 2019 operation was a particularly strong year and passenger volumes finished at 18m. This meant the baseline used for noise, passengers, routes and fleet operations were built on demonstrably true performance.

In each future year, fleet assumptions were changed to reflect the published fleet replacement plans of each of the major airlines, with assumptions made where fleet plans were unclear. As easyJet, Wizz and Ryanair publish fleet renewal plans as part of their annual reporting over 90% of fleet renewal assumptions were based on publicly available, and verifiable information. This was completed by changing aircraft on individual flights to reflect the mix of aircraft across the entire airline. For example, If Wizz were to have

50% A320 NEOs in 2025 across the entire fleet, this share would be reflected across operations at LLA. For easyJet where they do not operate A321s from LLA, the fleet was calculated excluding this aircraft type. Where fleet renewal meant that alternative constraints or bottlenecks were to be hit, for example terminal capacity, routes were thinned, for example 5 daily Budapest would become 4 with the reduced flight within the 92 day period being displaced into non-peak months.

Fundamentally, utilising actual performance in 2019 allowed a robust base to apply future assumptions allowing for forecast that should deliver a good level of confidence. This data was considered accurate at the time of original ES submission in January 2021. At that time, it was considered that the demand for flights would have rebounded after lockdown had eased. This has not been the case. However, it is not usual practice to update forecasts between ES submission and resolution of the application. An ES always provides a reasonable forecast of what can be foreseen at the time of application.

The forecasts provided still represent a reasonable view of how passenger levels will rebound post-COVID and reflect the confidence of LLAOL and the airlines. The fact that the noise levels in 2021 have been overpredicted due to the continuation of the pandemic does not invalidate the overall assessment results. The worst-case year for significant effects (upon which the assessment results and mitigation are based) is conservatively still considered to be 2022, but this is dependent on demand and the continued effect of Covid-19 on international travel. Whether the Government continues to offer slot relief to airlines will also be a factor. For example, if there is no slot relief for airlines then they will fly the slots currently filed which matches the forecast for 2022. Based on current fleet renewal information obtained from airline published accounts, 2031 is still considered the year in which the existing Condition 10 would again be met.

#### Technical Queries

- **DG** - *I must admit that I did not understand the rationale or workings behind the original Appendix 3A, since it seemed to show that with development (19mppa) the number of neos (during the day time and night time) would be lower than without development – but then there was a final column which did not split between day and night (just said 2028 19mppa) and that had totals which did not relate to the two columns before and gave a much higher figure. There was also no explanation as to how these figures had been arrived at (for instance why does the A319neo drop to 0 with development and yet is over 3000 day and 440 night in 2028 without development [but again the 2028 18mppa has no bearing on the two columns in front of it as it shows 0]).*

#### Wood response:

The ATM data has been updated in Appendix 8B to include previously missed data within the January submission. However, some of the points made by DG still hold, for example, some numbers of the NEO aircraft being less in the 19 mppa scheme scenarios. Modernisation is a general trend and should be considered in the terms of the ratio between the older type aircraft and the total numbers. Importantly, by 2028 there are more modernised aircraft than older types. It can be confirmed that the forecast data was accurate as of the submission date of the ES in January 2021.

#### Technical Queries

- **DG** - *Appendix 8H has 77% of the daytime arrivals as being either NEOs or MAXs and 57% of the night time arrivals being those new generation aircraft. Where is the fleet mix modelled for the different years?*

#### Wood response:

Fleet mixes for the 92-day summertime for scenarios 2021 to 2028 are presented in Appendix 8B. The fleet mix for 2031 is presented in Table 1 of Appendix 8H.

### 3. Validation of aircraft

#### Technical Queries

- **DG** - *The A321neo does not appear to perform as predicted by the ICAO noise certification and therefore on the basis of the information submitted, it does not appear to offer any confidence that the uptake of further A321neos will provide the benefits in noise reduction that might be assumed based on the ICAO noise certification (a matter that has been raised at the LLACC and the Noise and Track Sub-Committee of the LLACC).*

#### Wood response:

The aircraft validation has been updated to take account of the higher noise levels measured for the A321neo than stated within the certified levels. It is likely that average measured levels for the A321neo will be reduced in the future. To date, a greater proportion of A321neos being used were for longer haul flights with a greater fuel capacity and therefore more thrust needed on departure and higher noise levels. In the future, the average noise from the A321neos would be expected to be lower due to a greater proportion of flights being short-haul, with less thrust needed on departure and therefore resulting in lower noise levels. It is also anticipated that discussion between the manufacturer and airline may lead to further reductions in the noise produced as a result of a review of discrepancies between certification noise levels and measured noise levels.

#### Technical Queries

- **VC** - *There are still questions regarding the noise data used for the A321Neo. Section 4.3 of the 2021 first quarter noise monitoring report indicates that the A321Neo is the noisiest of the aircraft regularly operating at Luton: they are around 2dB noisier on arrival but up to 5dB noisier on departure than the A320Neo. The A320Neo is, in turn about as noisy as its predecessor the A320 on arrival and about 3dB quieter on departure. It is not possible to make a similar comparison for the A321Neo, as data for its older sibling are not given, but the graph shows that this modernised aircraft type is still noisier than any other modernised or older variant aircraft operating in reasonable numbers at Luton. In my view, it would be beneficial for the data that are used to validate the A321Neo modelled noise to be published or included in the revised noise chapter. It is extremely important that realistic and reasonable aircraft noise levels are being used to determine the extent of the noise contour limits. If they are, for whatever reason, unduly optimistic, LLOAL will find it difficult to meet the modified, albeit temporary, limits it is now seeking and LBC may well find themselves having to deal with yet another breach of condition in the not-too-distant future.*

#### Wood response:

The validation of the modernized aircraft used within the noise modelling has been based monitored data taken from a valid year where Condition 10 was breached. What hasn't been accounted for in the modelling (because it cannot be guaranteed) is the work that Airbus is doing to understand why the forecast reductions in noise are not being realised and the expectation that in future years the noise will reduce when Airbus finds the cause. It is considered that the worst-case scenario has been used to forecast our noise impacts.

#### Technical Queries

- **DG** - *On page 5 of 6 it refers to modelled change in noise levels for the A321neo being based on 2018 results – yet in 2018 there were only 1,434 A321 movements (approx. 1% of total ATMs which in that year were 141,475) so this is probably too small a sample (the A320neo was about 4% that year). The AMR for that year also flagged up the limited numbers and specifically said that because they were so few that the modelling for the A321neo was based on its noise certification which was given as -1.8 for arrival and -6.3 for departure compared to the A321ceo. It is also worth pointing out that the comment on page 5 of this*

*appendix is contradicted by the response in Appendix 8D1 (third page penultimate row) which says "In the case of the A321neo, as it only started operating recently, it has been modelled based on measured noise levels from 2019, the first full year for which data was available."*

#### Wood response:

Due to when the assessment started and to maintain consistency between the various sets of contours, the contours for the 19mppa application were produced using our 2019 validation and methodology, which is based on measured results from the NMT system in 2018. The only 2019 noise measurements that were used were those for the Airbus A321neo, rather than the certification noise levels used previously. 2019 data was used as it was the first full year for which data was available for the A321neo in sufficient numbers. It should mean that going forward, if activity at the airport grows as forecast the noise contours will be no larger than those in the application, so if permission was given the future noise would not be expected to be worse than forecast.

#### Technical Queries

- **AL** - *It is clear, and acknowledged, that the noise performance of the A321neo aircraft at Luton is very significantly worse than its certification levels, both on arrivals and departure. The explanation for this provided by Wizz pilots is that they have to apply more flaps and thrust on arrival and departure due to the comparatively short runway at Luton, and the speed restriction on the first turn on R25 departures. The latest QMRs at Luton clearly show the A321neo being often louder on departure than the A321ceo.*
- *If the outcome of the current application were ever to be contested, given that BAP provided the modelling data used in the vol 3 report, are you happy still to stand by all the information in that report given the latest data on the A321neo noise levels which now runs through 2020 and into 2021?*

#### Wood response:

The latest noise modelling work, including the  $L_{Aeq}$  contours within the updated Chapter 8, was expanded to allow for the measured results in 2019 for the Airbus A321neo upon which validation was based. This meant that the performance of the modernised aircraft was taken as very similar to the Airbus A321ceo on arrival, and slightly quieter (1 – 2 dB) on departure. For information purposes only, BAP has reviewed the measurement data from 2019 and 2020 for the Airbus A321ceo and A321neo as shown in Table 1 for arrivals and Table 2 for departures.

Table 1 Noise on arrival comparison for A321s

| Aircraft Type | 2019 Arrivals NMT1           |                                 | 2020                         |                                 |
|---------------|------------------------------|---------------------------------|------------------------------|---------------------------------|
|               | Number of Monitoring Results | Average Noise Level, SEL, dB(A) | Number of Monitoring Results | Average Noise Level, SEL, dB(A) |
| A321 ceo      | 6,372                        | 84.6                            | 3,397                        | 85.0                            |
| A321 neo      | 458                          | 84.8                            | 661                          | 84.8                            |

Table 2 Noise on departure comparison for A321s

| Aircraft Type   | 2019                         |       |       |                                 |      |      | 2020                         |       |       |                                 |      |      |
|-----------------|------------------------------|-------|-------|---------------------------------|------|------|------------------------------|-------|-------|---------------------------------|------|------|
|                 | Number of Monitoring Results |       |       | Average Noise Level, SEL, dB(A) |      |      | Number of Monitoring Results |       |       | Average Noise Level, SEL, dB(A) |      |      |
|                 | NMT1                         | NMT2  | NMT3  | NMT1                            | NMT2 | NMT3 | NMT1                         | NMT2  | NMT3  | NMT1                            | NMT2 | NMT3 |
| <b>A321 ceo</b> | 2,623                        | 6,406 | 5,350 | 85.7                            | 85.3 | 85.7 | 738                          | 3,153 | 1,360 | 84.3                            | 84.9 | 85.9 |
| <b>A321 neo</b> | 225                          | 462   | 331   | 84.0                            | 83.5 | 83.6 | 174                          | 512   | 339   | 83.0                            | 83.4 | 84.2 |

**Wood response:**

The results still show that noise levels from the A321neo are lower on departure than the A321ceo; and align with the latest computer noise modelling. Comparing the types, they are very similar on arrival, but the Airbus A321neo is quieter on departure, although by less than certification data would suggest. For arrivals, the measured noise levels for each type are similar in both years, and in the case of the A321neo they are the same. For departures, the latest measured noise levels for each type are lower at NMT1, slightly lower at NMT2, and slightly higher at NMT3 in 2020. Overall, this suggests that using the more recent data, instead of the earlier 2019 data, would not significantly change the latest day and night contours in the ES. For the avoidance of doubt, the information provided in the table above is not considered substantive information relating to the environmental statement.

## 4. Scenario years

**Technical Queries**

- **VC** - *By 2028, no significant adverse effects are forecast to occur at night, but we can make no judgment as to the situation in 2025, 2026 or 2027 as no data are provided. It is reasonable to assume that such effects are likely to occur in at least one of these years, in which case the full extent of significant adverse effects cannot be determined from the ES. Para. 8.6.3 of the revised noise chapter suggests that details of these effects are not required as they are likely to be similar to, but lower than, 2024. However, numbers are required in order to ensure that the roll out of any sound insulation scheme is done so within a timeline that ensures significant adverse effects are fully mitigated.*

**Wood response:**

Luton Airport has agreed to offer mitigation as per the existing noise insulation scheme for all those identified as experiencing a significant noise effect, based on a 1dB or more change over the Significant adverse Effect Level (SOAEL). The mitigation applies to all those within the worst-case extent of the noise contours. For the SOAEL (63 dB during the day and 55 dB during the night) this year is 2022. The 2024 and 2028 assessments show how the noise effect reduces over time. In no year after 2022 would the noise effect be more and therefore by assessing the noise effect of the 19 mppa application in 2022 and providing mitigation for this year, there is no need to provide further information for intervening years. A noise assessment of 2025 – 2027 would not change the conclusions of the assessment or the mitigation, which would be applied as soon as reasonably practicable to those residences affected. A timeline for mitigation was included within the January 2021 submission but was removed further to a request from Vernon Cole during the meeting of 13<sup>th</sup> April. It was suggested that it gave the impression the insulation scheme would not be offered to everyone, whereas it was provided as an indication to the scale of increase in budget that the airport would afford to the scheme to expedite the insulation offers and deployment of insulating properties.

### Technical Queries

- VC** - Since comparable data are not provided for the year 2031, when noise levels will have reduced to the point that the original Condition 10 noise contour limits will be met, it is not possible to identify how many properties will still be exposed to noise levels above the SOAEL. The revised ES includes Appendix 8H, in which BAP demonstrate that the extent of the 55 dB LAeq,16h daytime and 48 dB LAeq,8h night-time noise contours will not exceed the LT limits in 2031, but no details are provided of the number of dwellings within the respective SOAEL contours. I do not accept the statement in para. 8.4.8 of revised Chapter 8 that no further assessment is required for 2031 as it does not form part of the 'with scheme' scenario. If the applicant is relying on noise levels in this year to demonstrate compliance with policy, it is a relevant year of assessment and further data should be provided. Since the application relies on aircraft operations through to year 2031 to achieve the originally agreed Condition 10 LT noise limits, thereby complying with government policy, it is my view that 2031 is a relevant assessment year. All tabulated information for noise levels, noise effects, operating numbers etc. for each assessment year should be extended to include 2031.

### Wood response:

The applicant is relying on the 2031 data presented in Appendix 8H to show the end to the application timescale. Having the noise limits of the existing Condition 10 met in 2031 means that this is not part of the application and not requiring an assessment. The relevant information in terms of fleet data and compliance with the existing Condition 10 are presented in Appendix 8H. As the predictions show that this year would meet the Condition 10 again, any assessment would neither show a significant adverse impact nor more properties above SOAEL in comparison with 2022 worst case year. Whilst it is not considered necessary for the application submission, a summary of assessment results for 2031 is presented in Table 3.

Table 4.1 2031 Noise Results

|                     |                  | Area | Dwellings | Population |
|---------------------|------------------|------|-----------|------------|
| Condition 10 Limits | Daytime 57 dB    | 14.7 | 3,194     | 7,487      |
|                     | Night-time 48 dB | 31.5 | 6,893     | 16,328     |
| SOAEL               | Daytime 63 dB    | 4.8  | 411       | 1,102      |
|                     | Night-time 55 dB | 8.6  | 969       | 2,620      |

The numbers of dwellings experiencing noise above SOAEL for 2031 is lower than any other assessed year. This information does not change the conclusions of the assessment submitted in the updated Chapter 8 noise assessment for the ES. For the avoidance of doubt, the information provided in the table above is not considered substantive information relating to the environmental statement.

## 5. Assessment

### Technical Queries

- DG** - Was the data from 2011 that informed the 2012 ES and planning application 12/01400/FUL updated for the Noise Chapter to include additional dwellings/population that have been built since the original ES



*(my ref to CACI data in the email of yesterday evening)? In which case does the ES Noise Chapter take this into account for the 'with development' and 'without development' for the assessment years?*

**Wood response:**

Yes, the noise assessment, both 'with' and 'without' development within the updated ES chapter includes for an updated population / dwelling database from 2018 CACI data. This figure is always much bigger than the 'actuals' from the Planning Portal search, so is a conservative assessment.

**Technical Queries**

- DG** - My view is that the submission could leave LBC/LLAOL in exactly the same position as we found ourselves back in 2017, when LLAOL first breached the summer night-time noise contour cap set out in condition 10. The assumption to the ES back in 2011 (which was submitted with the application in 2012 – ref: 12/01400/FUL) was that growth would be steady up to 2028 and matched by the delivery of the new generation aircraft, which would then reduce noise emissions from individual aircraft whilst ensuring that although ATMs might increase the noise contours could be adhered to and the number of people exposed to significant observable adverse effects would be constrained. The airport growth since 2012 was not in accordance with that modelled in the ES in that the airport grew at a much more rapid rate than anticipated in the ES, whilst the new generation aircraft are coming forward but have not been secured at a rate that matches the passenger growth. Our concern is that the information that has been submitted does not provide the certainty that the LPA (and indeed the airport operator) need to ensure that we are not in exactly the same position in a number of years' time as we have been in 2017, 2018 and 2019 – namely a breach of the condition 10 noise contour caps.*

**Wood response:**

Whilst this is a different application, it is important to understand the context with regards to the previous application for the Condition 10 amendment at 18 mppa. In that application, it was the concern of Luton Borough Council that too much headroom was being asked for unnecessarily which would give Luton Airport permission to increase noise levels without valid reason. That previous application was based on certified noise levels for the A321neo. For the 19 mppa application, Luton Airport has used more conservative assumptions both in terms of flight demand and noise levels from modernised aircraft. Both of these aspects were based on the best available data at the time of submission in January 2021. The effect of the Covid 19 pandemic has meant that the assessment results for 2021 have been overpredicted. However, given that the period for which these results apply is nearly over, this prediction is not relevant. The noise predictions for 2022 could still be accurate and represent a conservative approach so that the noise limits applied for are not breached.

## 6. Responses

**Technical Queries**

- DG** - I really struggled with your Appendix 8D1 as it included quotes from Vernon Cole's response but it is given as the meeting of 13 April 2021, yet the quotes appear to be taken from his comments of 25 February 2021 (but in a selective and piecemeal fashion). I am not happy that the responses in italic have been put down as Vernon Cole response 13th April 2021, and then the italics would suggest that they are quotes from Vernon, yet they are taken from his note and they are not direct quotes, thus for instance on the first page of Table 4.1 the two bottom paragraphs are selective extracts and yet they are not given as such and they have been pinned together, which has not been helpful when trying to see if a response to issue that Vernon had identified have in fact been addressed in full. So from those two paras they are taken from Page 1 of Vernon's note of 25 Feb 2021 and include elements from bullet 1, bullet 2, para 1.2.1,*

*para 1.2.4 and para 1.2.5. So it appears that there has been selective editing and consequently it is difficult to work out which element of Vernon's note is being addressed. It became even more tricky when I went to the second page and there was a response again stated as being 13th April 2021, but this chopped and changed, so the first para included reference to Vernon's para 3.2.2, then to bullet 1 in 3.2.1 and then to bullet 3 in para 3.2.1. However, for the second paragraph I have no idea where the quote has come from – rather it seems to be a precise of points made by Mr Cole from his note (in which case it should not have been in italics.*

#### Wood response:

The table in Appendix 8D consists of the Wood response to the Vernon Cole Memorandum (provided earlier in Appendix 8D), and the Vernon responses given as a main comment in his email sent after the meeting on the 13th April (these are directly taken from Vernon's email on the 13<sup>th</sup> April). This is stated in the title to the column: 'Wood response and Vernon's main comment on the response further to a meeting held on the 13th April 2021 to discuss the below'. There were other comments within the document attached to Vernon's email but not in a form that was readily added to the Appendix.

## 7. Other Matters

The following matters are either not considered to be key in the determination of the application or are covered in the discussions above, but are sufficiently distinct to warrant additional consideration. Reference to NHDC in the table below refers to North Hertfordshire District Council.

Table 4 Other queries

| Source | Comment  | Response  |
|--------|--|---|
| NHDC   | A request to have the noise results and effects disaggregated between Councils   | The scale of the effect is shown in the Figures associated within Appendix 3 of the January application, which can be used with reference to the various Council areas that could be affected.  |
| NHDC   | The assessment should consider future residential development in the local plan SP19 to the east of Luton.                   | Notwithstanding consideration of whether a future masterplan should be taken into account, the Figure A11060-S73-45-1.0 and A11060-S73-46-1.0 (Appendix 3 of the January application) show that the position of these residences would be outside of the SOAEL in the worst case (i.e. with the area with the largest extent above SOAEL) year of 2022.   |
| NHDC   | Mitigation only caters for internal noise levels with windows closed and therefore the residual effect is still significant. | The provision of sound insulation is part of a mixture of packages for minimising noise effects. Where this mitigation is taken up by the residences, the sound insulation is provided in conjunction with suitable ventilation. The provision of sound insulation as mitigation is advocated by UK Government within the Aviation Policy Framework.  |
| NHDC   | Concern over whether future breaches can be controlled.  | There are conservatism within the noise modelling such that the proposed Condition 10 amendments would not be breached. For instance, the use of recent noise monitoring data showing the A321 neo to have higher noise levels than certified, despite likelihood of it being quieter in the future. It should be noted however that there has been pressure from LBC to keep the Condition 10 contour areas only to that being required and therefore a balance has been sought by considering a reasonable fleet mix. |
| NHDC   | The modelling does not specify the engine type   | Currently the A321neos are mainly run by Wizz air using the PW1100G. In the future as Easyjet runs more A321neos there is likely to be an increased proportion of CFM LEAP engines. Certification data suggests that these engines would be very similar, but that the PW1100G would be slightly louder. Whilst recent monitoring   |



| Source  | Comment  | Response   |
|---------|--|--|
|         |  | has shown certification data to be optimistic in terms of noise reductions with the modernized fleet, the certification data at least suggests the CFM Leap would not be louder than the PW1100G. Given the validation of the A321neos is based on measured levels, mainly of Wizz aircraft, it is likely that the noise modelling presents a louder case than might be in the future with more Easyjet flights using A321neos.  |
| NHDC    | Concern over the unreliability of forecasting from past issues   | The recent forecasting for the ES submitted in January 2021 was from the best available, but conservative estimates known at the time. Issues of past forecasting were partially the result of overestimation of modernisation. Fleet assumptions were changed to reflect the published fleet replacement plans of each of the major airlines. This is more reliable than the early estimations noise modelling was based on in the 2012 ES. Discrepancies between forecasting and actual flights in 2021 have been because of the continuation of the Covid pandemic. |
| NHDC    | A risk that allowing an increase in passenger numbers is likely to increase night flights, further worsening the ability of NHDC residents to sleep undisturbed. | Appendix 8B shows an increase in night-flights when comparing 2028 19 mppa scenario and the 18 mppa scenario (not in the 2024 scenario where there are less night-flights with the 19mppa scenario). This has been taken into account in the assessment and compensatory measures added accordingly. It should be highlighted that the resultant exceedances of the night-time SOAEL for the 19 mppa scenario is less than using the original 12.5 mppa predictions from the 2012 ES (see Table 8.8 of the updated noise chapter).                                     |
| NHDC    | Section 106 agreement should be agreed to ensure delivery of a comprehensive sound insulation scheme   | There will be a Section 106.   |
| NHDC    | Contrary to NPPF related to mitigation and minimisation of adverse noise effects   | The 19 mppa application is putting into place measures to mitigate and reduce the potential adverse impacts of the application. Noise levels are predicted to reduce over time and will be back in line with the existing Condition 10 in 2031.  |
| LADACAN | Appendix 3A missing  | Air traffic movements are now in Appendix 8B.  |
| LADACAN | The identification of the baseline is unclear and should reference the existing Condition 10   | The assessment has been based on comparing the development scenarios (this includes 18 mppa as this has already been breached) with the Condition 10 contours. This is most clearly seen in Table 8.9 of the updated assessment which shows what scenarios have been compared. All baselines refer to the Condition 10 contour, which is either the existing or future (i.e. 2028 contour).  |
| LADACAN | L <sub>AMax</sub> and N-Contour queries  | Neither the L <sub>AMax</sub> nor N-Contours are a key material consideration in the deciding whether or not the application should be approved.   |
| LADACAN | Unrepresentative fleet mix from 2021   | The fleet mix and numbers for 2021 were based on the best information at the time of undertaking the noise modelling in 2020. The continuation of the Covid pandemic into the summer of 2021 has had an obvious and reasonable impact on these predictions. However, forecasts for 2022 and beyond are still considered to be reliable.  |
| LADACAN | Spreadsheet referred to in the BAP report has not been added into the domain.  | The retaining of this reference was an error (this appendix has since been updated in the latest version of the noise chapter and associated appendices). It is considered that all necessary information to make a decision on the application is included within the updated chapter and appendices  |
| LADACAN | Request for additional ATMs over and above those permitted from the Condition 10 contour limits.   | Number of ATMs alone will not provide useful information as to how aircraft movements relate to the differences between the existing and proposed Condition 10 as this also relates to fleet mix. Given the limits are based on noise contours it is also uncertain how this would assist in deciding upon the application.  |

| Source  | Comment  | Response  |
|---------|--|---|
| LADACAN | Invalidity of the 2016 and 2017 noise contours | None of the noise modelling undertaken for the 19 mppa application is based on these years so reference to 2016 and 2017 is not relevant. |

## 8. Wood summary

The information provided above is provided for clarification purposes only and to demonstrate that:

- Even if predictions for 2021 are no longer accurate and for 2022 to 2024 are in doubt, the actual noise levels and significance of effect from the application can only be lower than predicted. Forecasts and assessment results in 2028 (the key assessment year) have been based on the best information currently available and 2031 is still considered the date at which the existing Condition 10 limits would be reinstated.
- Despite recent measurements of the A321neo being higher than previously measured, this does not change the average noise measured for the purposes of validating modelled aircraft. Therefore, the results of the noise modelling are still considered reliable.

The information provided within this document is not substantive information relating to the ES and does not change the validity of the assessments within the ES submitted for the 19 mppa application (41431RR20V3 Environmental Statement, dated 11th January 2021).

### Issued by



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**Mark Evans**

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