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# London Luton Airport Expansion

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**8.156 Applicant's Response to Written Questions - Noise**

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**The Planning Act 2008**

**The Infrastructure Planning (Examination Procedure) Rules 2010**

**London Luton Airport Expansion Development Consent  
Order 202x**

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**8.156 APPLICANT'S RESPONSE TO WRITTEN QUESTIONS - NOISE**

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# 1 RESPONSE TO EXAMINING AUTHORITY WRITTEN QUESTIONS (NOISE)

Table 1.1: Responses to the Examining Authority's Written Questions (Noise)

PINS ID	Question / Response
NO.2.1	<p><b>Question: for All Local Authorities</b></p> <p><b>2019 actuals/ consented baseline</b>            The called-in decision for application ref: 21/00031/VARCON creates a potential 19 mppa fall-back position. On the basis that this fall-back position now exists, can the local authorities provide detailed reasons if, and if so why, they consider it necessary to use a baseline position other than the 2019 actuals that is set out in the ES? If an argument remained to use the 2019 consented baseline as the core case, what specific additional assessment do the Local Authorities consider would need to be submitted (including any health-related assessment) and why?</p> <p><b>Response:</b></p> <p>The Applicant notes that this question is directed to All Local Authorities, however the Applicant considers that a response from the Applicant will help provide further clarification.</p> <p>The Applicant's position on the use of 2019 baseline is set out in the <b>Applicant's ISH3 Post Hearing Submission [REP3-050]</b>, however, the Applicant would like to clarify that the use of a historic baseline does not affect the health assessment in <b>Chapter 13 of the Environmental Statement (ES) [AS-078]</b>. Whilst Disability Adjusted Life Years (DALYs) comparisons to the 2019 Actuals baseline are provided, it is the Do-Minimum to Do-Something change (which is not affected by the historic baseline) that is reported and used in the conclusions of the health assessment.</p>
NO.2.2	<p><b>Question:</b></p> <p><b>Fleet forecasts</b>            Appendix A of the Applicant's post hearing submission for ISH8 [REP6-066] includes forecast data to explain the differences between the 19mppa consented forecasts for 2028 and the Proposed Development's 2027 core and faster growth cases. Can the Applicant explain why their forecasts assume:</p> <ul style="list-style-type: none"> <li>• no Embraer aircraft movements in future but allow for this in other scenarios;</li> <li>• a trend of B737-800/ 73H reductions in future years but an increase in the core/ faster growth cases;</li> <li>• a reduction in the B737-max against a trend of increasing B737-max aircraft; and</li> <li>• proportionately greater increase in A320ceo in the faster growth case in 2027 than A320neo compared with the core case?</li> </ul> <p><b>Response:</b></p> <p>The Applicant notes that the forecasts produced for the core and faster growth cases are based on the long-term forecasts of demand and are, ultimately, non-airline specific based on the likely aircraft which will be used for passenger and freight services (as well as an allowance for business aviation). The key element is the broad proportional split between current generation aircraft (Airbus A319/A320/A321ceo's, Boeing 737-400/500/600/700/800) and new generation aircraft (Airbus A320/A321neo's and Boeing 737-MAX) given the broadly similar environmental benefits gained from switching from older to newer generations of aircraft. The balance of such types for the future assessment years has been considered to ensure a reasonable worst case for environmental assessment purposes.</p> <p>The fleet mix projections for the P19 Application were over a shorter-term period and built more on a bottom-up basis extrapolating current airlines' plans at the time when the ES for that project was submitted. These were extrapolated from the existing carrier mix and the specific types being operated by each airline, informed by detailed short term fleet replacement plans.</p> <p>In relation to the specific points above:</p> <ul style="list-style-type: none"> <li>• Embraer aircraft: The inclusion of the Embraer aircraft within the P19 fleet mix is likely the result of a small number of these aircraft operating in the base year from which the projections were made. As these were likely to be ad-hoc charter flights (i.e. not scheduled services or regular holiday charter flights) then it is difficult to say whether such aircraft would actually operate in the future in any specific year. Such activities may, for example, have been the result of airlines chartering in</li> </ul>

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	<p>these aircraft at short notice to provide cover for aircraft with technical faults that would normally operate a schedule. The core and faster growth case trend-based projections cannot easily take account of such hard to predict activities which may not even occur in any one year. However, to the extent that are a limited number of movements by such smaller aircraft in future, they have lower noise levels than the larger aircraft so their exclusion from the fleet mix is consistent with the noise assessments having been made on a reasonable worst case basis.</p> <ul style="list-style-type: none"> <li>• B737-800/73H and Boeing MAX aircraft: The P19 and DCO forecasts were independently developed and, hence, may not match at the detailed level. The DCO fleet projections to 2027 which were produced later than the P19 projections, take a more cautious view on the rate of transition of the Boeing fleet of aircraft, reflecting the known delays in delivery of these aircraft following their grounding for safety reasons over the period 2019/20.</li> <li>• A320ceo/neo aircraft: The proportionality difference between the core and faster growth cases is a direct function of the slower transition from current to new generation aircraft which is assumed in the faster growth case. This reflects uncertainties in the rate of fleet transition so as to ensure that a reasonable worst case has been assessed as outlined in paragraph 6.6.46 of the <b>Need Case [AS-125]</b>. In this case, fewer of the A320ceo's are assumed to switch to new generation by 2027.</li> </ul> <p>The fleet proportions for 2027 within the core and faster growth cases represent the reasonable range of fleet replacement pathways assumed within the DCO forecasts. Given that it would not be prudent to rely on detailed projections of individual airline fleets, as it cannot be certain which airlines will operate services to meet demand to/from London Luton Airport, the Applicant believes that it is the total proportional split between current and new generation aircraft which is important because the exact fleet cannot be known with certainty. Overall, the DCO projections assume a greater reliance on Airbus aircraft at the airport, reflecting the strong presence of Wizz Air and its known commitment to an Airbus neo fleet but it is important to allow some degree of flexibility in the precise fleet assumed for assessment purposes to ensure that noise outputs are robust to potential commercial changes.</p>
NO.2.3	<p><b>Question: to All Local Authorities</b></p> <p><b>Disregarded movements</b> The Air Noise Management Plan [REP6-051, paragraph 2.6.1] includes a list of movements to be disregarded. Confirm whether the grounds for dispensation are acceptable, given that certain matters identified may be within the control or influence of the airport. Confirm whether the Applicant should reference any particular guidelines on dispensation.</p> <p><b>Response:</b></p> <p>The Applicant notes that this question is directed to All Local Authorities, however the Applicant considers that a response from the Applicant will help provide further clarification.</p> <p>The Applicant would like to note that it has updated the <b>Air Noise Management Plan [TR020001/APP/8.125]</b> to reference and align the list of dispensations with the relevant DfT guidance (Ref 1). This guidance is considered an appropriate mechanism for determining when it is appropriate to dispense aircraft that are not within the airport operator's control.</p>
NO.2.4	<p><b>Question:</b></p> <p><b>Noise violation limits</b> The Air Noise Management Plan [REP6-051] includes a proposed reduction in the noise violation limits from 2028, consistent with the current permission. Given the long-term nature of the Proposed Development, should the plan seek to include additional reductions in those limits in subsequent phases?</p> <p><b>Response:</b></p> <p>The Applicant notes that the current Noise Violation Limits (NVLs) were reduced by 2dB during the day and 1dB during the night in 2020 and it is these lowered NVLs that are secured in the <b>Air Noise Management Plan [TR020001/APP/8.125]</b>. A further reduction of 2dB during the night is then applied from 2028. In addition, the <b>Air Noise Management Plan [TR020001/APP/8.125]</b> has been updated at Deadline 7 to specify that the daytime NVL will also be reduced by an additional 1dB in 2028. This represents a total reduction between 2020 and 2028 of 3dB during the daytime and night-time. It should be noted that NVLs are a 'trailing' noise management measure</p>

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	<p>that are primarily adopted to support compliance with the Noise Abatement Operational Procedures (NAOPs) adopted at the airport as set out in the Noise Action Plans (see the airport operator's draft Noise Action Plan for 2024-2028 included in [REP5-090] which provides information on all the operational procedures that are in place at the airport or that the airport operator will trial and implement where possible over the next 5-year period (2024-2028)).</p> <p>The principal mechanism for securing the transition of new-generation (and then next-generation) aircraft into the fleet and to share the benefits of the new technology is the Noise Envelope within the <b>Green Controlled Growth Framework [TR020001/APP/7.08]</b>. It is recognised that the NVLs (and their reductions) could be used to provide an additional incentive to introduce quieter new-generation aircraft whose noise performance is known as well as to further encourage reduction in departure noise by adherence to NAOPs. The reduction in NVLs in 2028 reflects the increasing proportion of 'known' new-generation aircraft in the fleet. Any further reductions beyond those already in place may similarly provide an incentive over and above the GCG Framework for future next-generation aircraft or new operational procedures following an airspace change. As these next-generation aircraft do not yet exist, and the airspace change is not yet confirmed, it is therefore not possible to determine an appropriate reduction in NVLs to take this into account. Paragraph 1.1.4 of the <b>Air Noise Management Plan [TR020001/APP/8.125]</b> already specifies that the plan is capable of being reviewed and revised in the future in response to new technology and this paragraph has been updated to specify that this review must happen every five years in line with the Noise Action Plan cycle. Such regular review will be able to take into account changes in aircraft technology or airspace change.</p>
NO.2.5	<p><b>Question:</b></p> <p><b>ATM cap</b> Noting the Applicant's comments about the crudeness of simple movement caps [REP1-003], can the Applicant and Local Authorities confirm what the numeric value of a total ATM cap should be if one were to be applied to the airport. Should the cap vary over time?</p> <p><b>Response:</b></p> <p>The Applicant has previously noted in Section 3.7 of the <b>Applicant's ISH8 post hearing submission [REP6-066]</b>, that movement limits are poorly correlated with noise impact metrics and provide no incentive for the adoption of quieter aircraft and therefore no further movement limits are proposed (over and above the movement limit in the night quota period), though annual movements will be reported as set out in the <b>Aircraft Noise Monitoring Plan [TR020001/APP/7.08]</b>, secured by DCO Requirement.</p> <p>This is in line with CAA's CAP1731 document (Ref 2), which includes a review of suitable noise metrics for limiting and controlling noise, and which notes on page 58 that the number of movements: <i>"has good correlation with day noise quota count and night noise quota count, when broken down into the number of movements per day and night respectively. It shows reasonable correlation with day noise contour area, but it gives no mechanism to limit impact within a given area. It also does not have any correlation with people exposed, so it would not be effective in controlling population noise exposure or in driving noise reduction. Overall, the number of movements is a metric that should be monitored to understand the growth of the aviation market, but it does not provide effective controls to limit noise generation, noise exposure nor noise impacts."</i></p> <p>Without prejudice to this position, the Applicant would highlight that any movement limit would need to reflect that the precise future mix of routes and airlines to 2043 (32 mppa in the core planning case) cannot be known so any movement limit would need to allow some flexibility for more smaller aircraft to be operated meaning that the number of movements might exceed the total number of aircraft movements<sup>1</sup> that form the assessment cases as set out in Table 6.9 of the <b>Need Case [AS-125]</b> or the number of passenger air transport movements (PATMs) shown in Table 6.8 but still be within noise limits.</p> <p>Although the Applicant does not believe such a movement cap to be necessary or appropriate, it considers that any limit on annual aircraft movements should not be less than 225,000 annual aircraft movements to allow for the potential for a variant mix of smaller aircraft types to be deployed in future to deliver 32 mppa, the impacts of which would still be control by the Noise Limits in Green Controlled Growth.</p>

<sup>1</sup> Note that Air Transport Movements (ATMs) do not account for all aircraft movements at London Luton Airport as not all business aviation movements are classed as ATMs.

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NO.2.6	<p><b>Question:</b></p> <p><b>Shoulder period noise controls</b> If additional ATMs were consented during the night shoulder periods, as proposed by the Applicant, can you suggest what would be suitable shoulder period quota count point limits and/ or ATM limits?</p> <p><b>Response:</b></p> <p>As noted in <b>Applicant's Response to Issue Specific Hearing 9 Actions 8, 19 and 20 – Quota Count Noise Controls [TR020001/APP/8.170]</b>, the Applicant considers that the combination of contour area limits, Quota Count (QC) limits and Night Quota Period movement limits are fully robust and in line with best practice in airport noise controls and are in line with Civil Aviation Authority recommendations for noise control in CAP1731 (Ref 2). The controls proposed represent the most restrictive noise controls in UK aviation. Consequently, no further movement limits or QC limits are proposed.</p> <p>The same document <b>[TR020001/APP/8.170]</b> demonstrates how the current requirement in the <b>Green Controlled Growth Framework [TR020001/APP/7.08]</b> to employ QC budgets will provide sufficient control and protection for the full night period (2300 to 0700), with a focus on the shoulder periods given the QC limit imposed on the night quota period (2330 to 0600) in the <b>Air Noise Management Plan [TR020001/APP/8.125]</b>.</p> <p>Although the Applicant does not believe such a movement cap to be necessary or appropriate, it considers that any limit on annual aircraft movements in the 06:00 – 07:00 shoulder period should not be less than 13,000 annual aircraft movements.</p>
NO.2.7	<p><b>Question:</b></p> <p><b>Quota count zero implications</b> In light of the emergence of Quota Count zero aircraft, explain how the quota count point limits would ensure that aircraft noise is controlled in the future?</p> <p><b>Response:</b></p> <p>Firstly, it is important to note that the principal noise control limit in the <b>Green Controlled Growth Framework [TR020001/APP/7.08]</b> is the Noise Envelope noise contour area limits. All aircraft movements, regardless of their QC value, are taken into account in modelling these noise contours and evidencing compliance with the Noise Envelope Thresholds and Limits.</p> <p>QC counts are a measure of 'input' to a forecast rather than 'output' such as an <math>L_{Aeq}</math> noise contour which directly relates to noise impacts. This is why the controls in GCG use QC as forward planning 'budgets' and noise contour areas as 'limits'. This approach avoids any issues that could occur due to QC0 aircraft if limits were set using QC only.</p> <p>Based on the CAA QC Noise Classifications used at the time of the submission (AIP Supplement 058/2022), there are no commercial passenger or freight aircraft which have a QC of 0 points. This zero rating did previously apply to some new generation types, but as of 2018 a value has now been added to these to reflect that QC limits did not initially place any restriction on movements associated with new generation aircraft.</p> <p>The QC0 values now apply primarily to smaller business aviation aircraft types and some of these are anticipated to operate in the future, but a number of the business aircraft using Luton will also have a QC value above zero. Taking into account the assessed fleet for business aviation, in 2027 6.7% of all movements are estimated to have a QC0 rating, decreasing to 5.7% in 2039 and 5.0% by 2043 based on the fact that business aviation will be a falling proportion of all movements over time.</p>



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	<p>In all future years all passenger and freight aircraft within the forecasts have a QC value and are included in any QC calculations. It is expected that this will remain the case in future. However, should some next generation types be classified as QC0, these would still be full accounted for in the assessment of the noise contours and, to the extent that QC0 aircraft are operated on scheduled passenger or cargo flights in future, this would need to be taken into account in setting the QC budgets. Similarly the budget needs also to allow for business aviation activity that relies on ad hoc slots.</p> <p>It is important to note that the calibration of historic QC counts to noise contours already have a proportion of QC0 aircraft within these which means that in determining the relationship between contour area limits and QC budgets (see paragraph 3.1.7 of <b>Green Controlled Growth Framework [TR020001/APP/7.08]</b>), the effect of QC0 aircraft on this relationship is taken into account. The requirement to update this correlation on an annual basis will take into account the effect of any changes in proportion of QC0 aircraft over time.</p>
NO.2.8	<p><b>Question: to LBC, Central Bedfordshire Council and North Herts Council</b></p> <p><b>Monitoring for ground noise impacts</b> Do you consider that any additional noise monitoring should be undertaken in proximity to the airport in respect of ground noise impacts? If so, where should this be?</p> <p><b>Response:</b></p> <p>The Applicant notes that this question is directed to the Host Local Authorities, however the Applicant considers that a response from the Applicant will help provide further clarification.</p> <p>The Applicant would like to note the practical difficulties in monitoring ground noise. Monitoring of specific sound sources requires the ability to be able to clearly distinguish between sound sources. For road traffic noise this can be achieved by measuring at the side of the road where road traffic noise is clearly dominant. For aircraft air noise this is achievable when the monitors are positioned close to flightpaths in areas that are relatively free of other sound sources. Even in areas where other sources of sound are present, it is possible to separate discrete aircraft air noise events from other more continuous sound sources such as road and ground noise.</p> <p>Monitoring ground noise (i.e. noise emissions from aircraft taxiing between stand and runway, engine testing and Auxiliary Power Units) however is extremely difficult, as it is generally not possible to distinguish this continuous sound source from other sound sources such as road traffic noise, or the sound of aircraft either in the air or on the runway in the landing and take-off cycle (which is also air noise, see paragraph 16.1.2 of <b>Chapter 16 of the ES [REP1-003]</b>). As a result, the Applicant and the airport operator have been unable to identify any location in which it would be possible to accurately monitor ground noise.</p>
NO.2.9	<p><b>Question:</b></p> <p><b>Cargo, business and private ATM movements</b> The impact of night flights has been raised as a significant concern by residents, in particular late night/ early morning cargo flights.</p> <ol style="list-style-type: none"> <li>1. <b>Applicant:</b> explain what specific restrictions apply to cargo, business and private flights during the night-time period if different from commercial flights.</li> <li>2. <b>Local authorities:</b> Given the proposed increase in commercial flights during the night period, should additional constraints now be placed on any cargo, business and private flights? If not, why not, and if yes what should they be?</li> </ol> <p><b>Response:</b></p> <p>In response to part 1 of this question, the Applicant notes that the DCO noise controls in the <b>Air Noise Management Plan [TR020001/APP/8.125]</b> and the <b>Green Controlled Growth Framework [TR020001/APP/7.08]</b> will control noise from all aircraft and therefore they apply equally to cargo, business, private and passenger flights. However, this does not preclude the airport operator from introducing additional restrictions in order to stay within the limits imposed by these noise controls.</p>



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	<p>The Applicant notes that part 2 of this question is directed to local authorities and would welcome the opportunity to respond to their responses submitted at D7, at D8, if appropriate. It is important to note, however, that the operation particularly of cargo flights at night, is economically important as such flights are principally bringing in express parcels and packages for early morning delivery in the north London area and the failure to allow such flights would have broader commercial implications for shippers.</p>
NO.2.10	<p><b>Question:</b></p> <p><b>Noise abatement procedures</b> Discussions at ISH8 and post-hearing submissions [REP6-134] suggest that noise abatement procedures such as continuous descent approach are already operating at Luton Airport and steeper descent approaches are not considered to be viable at present [REP6-140]. Confirm whether any viable noise abatement procedures remain available to the Applicant that have not already been implemented?</p> <p><b>Response:</b></p> <p>The Applicant notes that the Noise Abatement Operational Procedures (NAOPs) that are available to the airport operator have been considered and have been implemented where they are viable, see the airport operator's draft Noise Action Plan for 2024-2028 included in [REP5-090] which provides information on all the operational procedures that are in place at the airport or that the airport operator will trial and implement where possible over the next 5-year period (2024-2028). The airport operator has confirmed that there are no viable noise abatement procedures that have been identified within the constraints of current (including new-generation) aircraft technology and current airspace design that have not already been implemented or trialled.</p> <p>Further changes to NAOPs may be possible following the completion of the FASI-S airspace change process or the introduction of next-generation aircraft technology, in which case they would be picked up in the Noise Limit Review process (see paragraph 3.2.29 onwards of <b>Green Controlled Growth Explanatory Note [TR020001/APP/7.07]</b>) to determine whether such changes could result in a decrease in Noise Envelope Limits.</p>
NO.2.11	<p><b>Question:</b></p> <p><b>Insulation of residential outbuildings</b> At CAH1 the Applicant confirmed that residential outbuildings would be eligible for noise insulation but not buildings such as sheds or garages. The compensation policies [REP4-042] were revised at D4 but did not clarify this point. Can the Applicant supplement the text in 6.1.8 of the compensation policies [REP4-042] to clarify that the policy would also cover residential outbuildings?</p> <p><b>Response:</b></p> <p>The Applicant confirms that the <b>Draft Compensation Policies, Measures and Community First</b> document has been updated with text as requested in the question. See para 6.1.8 of the updated document submitted at Deadline 7 [TR020001/APP/7.10].</p>
NO.2.12	<p><b>Question:</b></p> <p><b>Early morning traffic movements</b> Explain the likely surface access noise impact arising from early morning traffic movements to the airport and whether such peaks would be likely to give rise to significant changes in noise during these periods compared with the Do Minimum situation. Draw on traffic and noise modelling data and provide commentary on specific areas such as Buckinghamshire, where specific concerns have been raised about traffic flows in the early morning period [REP6-087].</p>

PINS ID	Question / Response
	<p><b>Response:</b></p> <p>The Applicant notes that the methodology for identifying significant effects from surface access noise is set out in Section 16.5 of <b>Chapter 16 of the ES [REP1-003]</b> and set out in more detail in Section 9 of <b>Appendix 16.1 of the ES [TR020001/APP/5.02]</b>. The methodology follows National Highways' Design Manual for Roads and Bridges (DMRB, Ref 3) and the Calculation of Road Traffic Noise (CRTN, Ref 4) and has been agreed with each of the Host Authorities as noted in the Statements of Common Ground <b>[REP6-027 to REP6-036]</b>.</p> <p>The methodologies in DMRB and CRTN take into account traffic throughout the day and night, including the influence of peak hours which are a common feature across road schemes. The methodologies, which are based on annual average exposure over a 18-hour daytime and 8-hour night-time period, are supported by several studies into annoyance from road traffic noise (DMRB, Ref 5). This focus on the wider daytime and night-time periods, rather than just a peak period, also aligns with studies into the health impacts of exposure to road traffic noise as reported by the World Health Organisation (WHO, Ref 6). The agreed methodology therefore takes account of early morning (and afternoon/evening) peaks in traffic volumes.</p> <p>The selection of roads used in the surface access noise study area has been agreed with each of the Host Authorities as noted in the Statements of Common Ground <b>[REP6-027 to REP6-036]</b>. The <b>Strategic Modelling Forecasting Report [APP-201]</b> shows the level of traffic impact within Buckinghamshire is forecast to be relatively low. As such negligible changes in road traffic noise would be expected in Buckinghamshire and it is therefore outside the surface access noise study area. This is supported in the <b>Applicant's Response to Issue Specific Hearing 7 Action 3 - Ivinghoe Junction Modelling Review [REP6-070]</b> where further detail about the traffic modelling within Buckinghamshire's road network, and the level of traffic impact per hour over the day, including the early hours, has been reported. For example, Table 3 in <b>[REP6-070]</b> shows that the increase in total peak hour traffic at the B489 / B488 junction, one of the key areas of concern, is expected to be no more than 2.1% and this would correspond to a negligible increase in road traffic noise of less than 0.1 dB.</p>
NO.2.13	<p><b>Question:</b></p> <p><b>Errata</b> The Errata document [REP5-036] states that there was a typographical error in Table 6.40. Confirm whether ES Appendix 16.1 [AS-096] now contains the correct data or provide this information and confirm that the revised information does not change any of the ES conclusions. ES Appendix 16.2 [REP4-023] still includes text on use of a rating level not more than 5dB above background (eg paragraph 5.1.3), which is inconsistent with the updated requirements in ES Appendix 16.3 [REP4-025]. This should be identified in the errata document or a revised version of the appendix for certification.</p> <p><b>Response:</b></p> <p>The Applicant confirms that Table 6.40 in <b>Appendix 16.1 of the ES [TR020001/APP/5.02]</b> has been updated at Deadline 7 to present the correct data. Previously, historic data was mistakenly reported in the first two columns of Table 6.40 which represent the 2027 Do-Minimum daytime and night-time fleet information. This error was presentational only, the correct number of aircraft movements were used in the noise modelling so the correction to data presentation does not change any of the conclusions in <b>Chapter 16 of the ES [REP1-003]</b>.</p> <p><b>Appendix 16.2 of the ES [REP4-023]</b> does not require updating. The reference to rating levels not more than 5dB above background in paragraph 5.1.3 is a correct reflection of paragraph 2.2.3 in <b>Appendix 16.3 of the ES [REP4-025]</b>, this aspect of the methodology has not been challenged or updated.</p>
NO.2.14	<p><b>Question:</b></p> <p><b>Confirmation of compensation commitments for Sue Ryder Centre Stagenhoe and Woodside Nursing and Residential Home</b> Confirm the absolute noise level predicted and the change in noise exposure in Phases 1, 2a and 2b at the Sue Ryder Centre at Stagenhoe, and Woodside Nursing and Residential Home. The air noise insulation scheme eligibility should be confirmed for each property and the Applicant should explain whether these receptors would qualify for noise insulation if they were treated as non-residential receptors rather than residential receptors.</p>

PINS ID	Question / Response
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**Response:**

The Applicant notes that the requested noise exposure and noise change data is provided in Table 1, Table 2 and Table 3 below for assessment Phase 1, Phase 2a and Phase 2b respectively.

No significant effects on health and quality of life or adverse likely significant effects are identified in any assessment phase for the Woodside Nursing and Residential Home following the assessment methodology (that has been agreed with the Host Authorities) in **Chapter 16 of the ES [REP1-003]**. The Woodside Nursing and Residential Home is not expected to be eligible for noise insulation as it is not predicted to meet the daytime or night-time eligibility criteria for community buildings scheme in paragraph 6.1.20 of **Draft Compensation Policies, Measures and Community First [TR020001/APP/7.10]**.

No significant effects on health and quality of life or adverse likely significant effects are identified in assessment Phase 1 for the Sue Ryder Care Centre. However, Tables 16.44, 16.46, 16.51 and 16.53 of **Chapter 16 of the ES [REP1-003]** identify continuing exposure above the air noise night-time SOAEL in assessment Phase 2a (and continuing into assessment Phase 2b) and night-time adverse likely significant effects for “isolated properties between the airport and Stagenhoe Park”, which includes the Sue Ryder Care Centre. This can also be seen in Figure 16.44b **[AS-110]** and Figure 16.68b **[AS-113]** which show the air noise SOAEL extends to include the Sue Ryder Care Centre in assessment Phase 2a and 2b. **Chapter 16 of the ES [REP1-003]** concludes that these identified effects would be avoided by the provision of noise insulation. Sue Ryder Care Centre is predicted to be eligible for noise insulation at assessment Phase 2a as it meets the night-time eligibility criteria for community buildings scheme in paragraph 6.1.20 of **Draft Compensation Policies, Measures and Community First [TR020001/APP/7.10]**.

Table 1: Noise exposure and noise change data for selected receptors, assessment Phase 1

Receptor	2027 DS		2027 Do-Something - Do-Minimum Change	
	Day, dBL <sub>Aeq,16h</sub> (SOAEL = 63dB LAeq,16h)	Night, dBL <sub>Aeq,8h</sub> (SOAEL = 55dB LAeq,8h)	Day, dBL <sub>Aeq,16h</sub>	Night, dBL <sub>Aeq,8h</sub>
Woodside Nursing and Residential Home	57.8	53.7	+0.7	+1.8
Sue Ryder Care Centre	59.2	54.9	+0.8	+1.0

Table 2: Noise exposure and noise change data for selected receptors, assessment Phase 2a (red indicates exposure above SOAEL)

Receptor	2039 DS		2039 Do-Something - Do-Minimum Change	
	Day, dBL <sub>Aeq,16h</sub> (SOAEL = 63dB LAeq,16h)	Night, dBL <sub>Aeq,8h</sub> (SOAEL = 55dB LAeq,8h)	Day, dBL <sub>Aeq,16h</sub>	Night, dBL <sub>Aeq,8h</sub>
Woodside Nursing and Residential Home	57.3	52.5	+1.3	+1.4
Sue Ryder Care Centre	59.3	55.2	+1.3	+1.7

Table 3: Noise exposure and noise change data for selected receptors, assessment Phase 2b (red indicates exposure above SOAEL)

Receptor	2043 DS		2043 Do-Something - Do-Minimum Change	
	Day, dBL <sub>Aeq,16h</sub> (SOAEL = 63dB LAeq,16h)	Night, dBL <sub>Aeq,8h</sub> (SOAEL = 55dB LAeq,8h)	Day, dBL <sub>Aeq,16h</sub>	Night, dBL <sub>Aeq,8h</sub>
Woodside Nursing and Residential Home	57.9	53.0	+2.0	+2.0
Sue Ryder Care Centre	59.9	56.1	+1.9	+2.6

PINS ID	Question / Response
NO.2.15	<p><b>Question:</b></p> <p><b>Noise insulation delivery</b> The Applicant's response to ISH3 Action Point 26 [REP4-079] outlines initial work on a process to market test availability of contractors with the results of this exercise to be shared prior to close of the Examination. What assurance can the Applicant give to the SoS that a new noise insulation scheme and delivery programme can be implemented and that this is secured by the draft DCO?</p> <p><b>Response:</b></p> <p>The Applicant has now received feedback on the proposed DCO Noise Insulation Schemes from three suppliers identified as being within the potential market for supplying noise insulation of the specification required.</p> <p>The high-level summary/take aways from this pre-market engagement were:</p> <p>All suppliers provided similar timescales for the delivery of work:</p> <ul style="list-style-type: none"> <li>• They made allowances of between 1-5 days' work per property (depending on the size of the property and which scheme it is eligible for).</li> <li>• All suppliers indicated that, using normal/existing resources, it would be between 7-9 years to deliver all the work within these schemes.</li> <li>• All suppliers indicated that, using additional resources and/or multiple suppliers, it would be possible to accelerate delivery to 3-6 years.</li> </ul> <p>Suppliers made varying assumptions regarding take up rates:</p> <ul style="list-style-type: none"> <li>• Some suppliers assumed a worst-case scenario of 100% take up; however, all suppliers recognised actual take up is likely to be much lower.</li> <li>• Generally, suppliers indicated take up rates are likely to be higher for the more comprehensive scheme/for those most impacted and lower for the more limited schemes/where the anticipated impact is lower.</li> <li>• This is based on their experience across other noise insulation schemes, which included examples from airport, road and rail noise insulation schemes.</li> <li>• All suppliers suggested similar levels of resource requirements and indicated that this is available within the current market (or could be made available with sufficient advance notice).</li> </ul> <p>Suppliers proposed different delivery models/solutions:</p> <ul style="list-style-type: none"> <li>• Some believe they have all capabilities in-house and would prefer to be the sole supplier; however, they would need to recruit additional resources to facilitate the delivery within the timescales needed.</li> <li>• Others suggest multiple contracts would be needed/preferable (e.g. 1 x acoustic consultancy, 1 x survey company and multiple installation contractors) to deliver the level of resource needed for these schemes.</li> <li>• All three suppliers indicated they would be interested in bidding for all or some elements of this work in the future.</li> </ul> <p>In conclusion, the market feedback supports the proposals we have put forward in the DCO that Schemes 1-3 could be delivered within 4 years of commencement of the Proposed Development.</p> <p>In response to the above the Applicant has further enhanced its commitment to take all reasonable steps to roll out the new noise insulation as fast as reasonably practicable. This is set out from para 6.1.37 in the Process section of the updated <b>Draft Compensation Policies Measures and Community First [TR020001/APP/7.10]</b> document submitted at Deadline 7.</p> <p><b>Draft Compensation Policies Measures and Community First [TR020001/APP/7.10]</b> will be secured by obligations in the s106 Agreement (or as may be necessary a unilateral undertaking) such that the Applicant will be required to adhere to the policy following consent to proceed with the Proposed Development.</p>
NO.2.16	<p><b>Question:</b></p> <p><b>Testing of insulation scheme</b></p>

PINS ID	Question / Response
	<p>Confirm what the proportionate sample size would be for the noise insulation testing [REP4-042, paragraphs 6.1.34 and 6.1.35], who the results of the noise insulation testing would be reported to and what mechanism would be in place to implement remedial action if required.</p> <p><b>Response:</b></p> <p>As noted in paragraphs 6.1.34 of <b>Draft Compensation Policies, Measures and Community First [TR020001/APP/7.10]</b> the Applicant confirms that details of the testing policy will be developed in consultation with the Noise Insulation Sub-Committee of the London Luton Airport Consultative Committee (LLACC) within six months of the Applicant serving notice on the relevant planning authority under article 44(1) of the DCO. Details of the testing policy, including specification of the sample size, are therefore not yet defined.</p> <p>Furthermore, there are no standards or guidance for what an appropriate sampling size would be. The Independent Commission on Civil Aviation Noise (ICCAN) review of noise insulation schemes (Ref 7) recommends development of a sampling strategy but does not provide recommendations of what such a sample size would be. The technical review by the Building Research Establishment (Ref 8) that informed the ICCAN's review states <i>"it is not possible at this stage to recommend specific sampling rates. It is unlikely to be necessary to test every property to ensure good outcomes, and it is likely that the rate of testing will need to be informed by condition, noise exposure and construction of property."</i></p> <p>Following this guidance, the sampling strategy will be developed in consultation with the Noise Insulation Sub-Committee and is likely to require provision of a proportionate coverage of:</p> <ol style="list-style-type: none"> <li>each noise insulation scheme (which covers a wide range of noise exposures);</li> <li>each insulation type or product;</li> <li>each insulation contractor;</li> <li>the range of building types and building conditions within each scheme; and</li> <li>individual unique building types as necessary.</li> </ol> <p>Similarly, the mechanism for implementing remedial action would be part of the policy to be developed as noted in paragraph 6.1.36 of <b>Draft Compensation Policies, Measures and Community First [TR020001/APP/7.10]</b>. As noted in that paragraph the mechanism is likely to involve providing reports of the sound reduction performance of tested insulation packages to the Noise Insulation Sub-Committee and providing commentary on the implications (if any) of the measured sound reduction performance on the quality control and improvement of the scheme going forward. This could include, for example, reporting of any learnings related to contractor workmanship or the availability, access to and performance of different insulation packages or products. Any remedial work on complete installations would be limited to correcting any issues with poor workmanship during installation, in the unlikely event this were to occur.</p>
NO.2.18	<p><b>Question:</b></p> <p><b>Effect of inflation on compensation proposals</b> Respond to CAH1, Action Point 25 [EV5-007] on the impact of inflation on compensation contributions, or signpost to where this information has been provided in the application documentation.</p> <p><b>Response:</b></p> <p>The Applicant has proposed a noise insulation scheme which will be industry leading in terms of both its eligibility and levels of compensation contribution. The contribution levels were set generously to enable the amounts to be fixed for the duration of the anticipated roll out of the Policy. No existing noise insulation policy in place at other airports across the UK have inflation linked compensation contributions but the Applicant does recognise that over the extended duration of its Proposed Development some mechanism for review is justified and this will help to address the potential for contributions to be eroded in real terms in an inflationary market.</p>



PINS ID	Question / Response
	<p>The Applicant responded to Action Point 25 through the re-issue at Deadline 4 of the <b>Draft Compensation Policies, Measures and Community First</b> document, provided also with tracked changes as had been requested at the Hearing. The Applicant confirms that compensation contributions will be reviewed every 5 years and this is provided at para 6.1.7 of the <b>Draft Compensation Policies, Measures and Community First [TR020001/APP/7.10]</b>.</p>
NO.2.19	<p><b>Question:</b></p> <p><b>Noise insulation sub-committee</b>            Explain when the noise insulation sub-committee of London Luton Airport Consultative Committee referenced in the compensation policies [REP4-042] and Noise Insulation Delivery Programme documents [REP4-079] would be established in relation to serving of a notice under Article 44 and outline the terms of reference for the sub-committee. In responding, explain how this would ensure timely implementation of the updated noise insulation programme and where/ how this would be secured.</p> <p><b>Response:</b></p> <p>The Noise Insulation Sub-Committee is already in existence and fulfils a similar role for the airport operator in connection with the current noise insulation scheme. The draft Terms of Reference for the Noise Insulation Sub-Committee will be finalised and agreed with LLACC, and are as follows:</p> <ol style="list-style-type: none"> <li>1. To be responsible for prioritising the eligible properties (both residential and non-residential) under <b>7.10 Draft Compensation Policies, Measures and Community First [TR020001/APP/7.10]</b> as approved by the DCO.</li> <li>2. To have authority to make decisions about the prioritisation of eligible properties to be offered noise insulation under the policy, such prioritisation to be based upon those most affected by noise with the committee having discretion to accelerate special cases.</li> <li>3. To receive quarterly reports on the number of properties being offered and taking up the noise insulation offered under the policy.</li> <li>4. To monitor and provide guidance to the Applicant regarding feedback from homeowners who have issues with the scope and specification of noise insulation being offered under the policy.</li> <li>5. To receive and resolve appeals from homeowners dissatisfied with the full package of insulation offered under Schemes 1 and 3 in the policy.</li> <li>6. To engage with the Applicant to maximise take up of noise insulation being offered under the policy and comment on ways that might help accelerate the roll out and assist those most affected by noise.</li> <li>7. To consider and comment on the administration, operation and development of the policy.</li> <li>8. To engage in the periodic review of the Policy to ensure levels of contribution are maintained over time.</li> <li>9. To be consulted on the development of a rolling testing policy to be introduced and maintained by the Applicant.</li> <li>10. To be maintained as a committee throughout the programme of delivery of the Proposed Development.</li> </ol> <p>For the implementation and retention of the sub-committee see paragraph 6.1.39 of the <b>Draft Compensation Policies, Measures and Community First [TR020001/APP/7.10]</b>, and see also the terms of reference at Appendix C of that document. In relation to the timely implementation for the noise insulation programme, and where / how this would be secured, see the response to NO.2.15 above.</p>

## REFERENCES

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Ref 1 Night flight restrictions at Heathrow, Gatwick and Stansted: Annex F Guidelines on Dispensations, Department for Transport, July 2014

Ref 2 Civil Aviation Authority (2019), CAP1731 Aviation Strategy – Noise Forecast and Analyses

Ref 3 Highways England (2020), Design Manual for Roads and Bridges, LA111 Noise and Vibration Revision 2.

Ref 4 Department of Transport/Welsh Office (1988), Calculation of Road Traffic Noise. Her Majesty's Stationery Office, London.

Ref 5 Highways Agency (2011), Design Manual for Roads and Bridges, HD213/11 – Revision 1.

Ref 6 World Health Organisation (2018), Environmental Noise Guidelines for the European Region.

Ref 7 Independent Commission on Civil Aviation Noise (2021) ICCAN review of airport noise insulation schemes

Ref 8 Building Research Establishment (2020) A review of insulation standards, building regulations and controls related to airport noise insulation schemes