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London Luton Airport Expansion

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Volume 8 Additional Submissions (Examination) 8.74 Applicant's response to Written Questions - Noise

Infrastructure Planning (Examination Procedure) Rules 2010

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The Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

London Luton Airport Expansion Development Consent Order 202x

8.74 APPLICANT'S RESPONSE TO WRITTEN QUESTIONS -NOISE

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RESPONSE TO EXAMINING AUTHORITY WRITTEN QUESTIONS (NOISE) 1

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

PINS ID	Question / Response
NO.1.1	The Applicant notes that this question is directed to the Civil Aviation Authority and does not consider it necessary to provide a response at this time.
	Question:
	Statement of no impediments
	Policy on Minimum Standards for Noise Modelling (CAP2091) and whether the CAA has any comments on the noise modelling information, assumptions (including modal split) and
	monitoring presented or the appropriateness of the modelling approach set out in ES Chapter 16 [REP1-003], in particular Sections 6 to 9 ES Appendix 16.1 [AS-096].
NO 1 2	You may wish to link the answer to this question with your answer to AQ.1.5. The Applicant notes that this question is directed to the Civil Aviation Authority and does not consider it necessary to provide a response at this time
110.1.2	
	Question:
	Airspace Capacity
	Confirm whether the CAA has updated its position since submission of its Relevant Representation [RR-0257, paragraph 3.5] that states "We were not aware of any evidence
	within the consultation documents to conclude that the projected increase in air traffic movements as proposed by the DCO can be accommodated within the existing airspace structure". Paragraph 4.3 of the representation appears to reconfirm this position in relation to the DCO proposals.
NO.1.3	The Applicant notes that this question is directed to the Civil Aviation Authority and does not consider it necessary to provide a response at this time.
	Question:
	Independent Commission on Civil Aviation Noise (ICCAN)
	At D3 [REP3-113] the CAA provided a summary of ICCAN functions that the CAA would continue to perform. The letter makes reference to a number of outputs such as an Annual Report on UK aviation noise, aviation noise, attitude surveys, noise action plans and work on metrics. Is the CAA able to confirm the programme for publication of any such
	documents that are likely to be of relevance to the Examination? If so, please submit copies as they become available.
NO.1.4	Question to the Applicant:
	Construction traffic - routeing (also raised under air quality)
	The outline CTMP [APP-130, Appendix 18.3] explains that whilst the majority of traffic would use the M1-A1081 to access the site, some use of the A602/ A505 corridor is anticipated. Explain what allowance has been included in the noise and vibration chapter to account for these movements and draw on evidence from distribution of construction.
	traffic for Project Curium works to demonstrate why this pattern of movements provides a robust assumption for the Proposed Development.
	You may wish to link the answer to this question with the answer to AQ.1.3.
	Response:
	As paragraph 16.9.67 of Chapter 16 of the Environmental Statement [REP1-003] notes the primary access route to the Main Application Site would be via Junction 10 of the M1
	along the A1081 (New Airport Way), then via President Way or the proposed Airport Access Road. Whilst there may be other access routes used by a small amount construction
	- traffic, these routes will consist of neavily trafficked main roads that will be unaffected by the additional construction traffic and have not been considered further in the assessment.

ponse at this time.

ite would be via Junction 10 of the M1, used by a small amount construction

PINS ID	Question / Response
	Paragraph 18.9.8 of Chapter 18 of the Environmental Statement [AS-030] identifies the section of A505 between its junctions with Gray's Lane and Park Way as the most sensitive section of road i.e. it is the section of road that could be used by construction traffic and has the lowest baseline flows. From 2016 baseline traffic data, this section of road has an Annual Average Weekday Traffic (AAWT) of 16,133 of which 1,150 are Heavy Goods Vehicles (HGVs).
	The greatest amount of average daily HGV movements occurs in assessment Phase 2a, where there are 342 average daily HGV movements in the peak quarter period. Assuming that every single one of these HGVs travelled to the Main Application Site using the A505 and none travelled via the primary access route then, following the methodology applied in Chapter 16 of the Environmental Statement [REP1-003] for construction traffic noise, this would result in an increase in traffic noise of 0.5dB, which is equivalent to a negligible impact and not significant.
	The approach to not consider potential impacts of construction traffic on the A602/A505 corridor is therefore considered appropriate and the conclusions in Chapter 16 of the Environmental Statement [REP1-003] are unchanged.
	The ES for Project Curium (LBC ref: 12/01400/FUL, ES Chapter 13 Ref 1) did not set out specific details of the distribution of construction traffic. The ES for Project Curium did state that to minimise the impact of construction vehicles accessing the site, vehicles would travel via designated sites to be agreed with relevant bodies including the highway authorities. The approach and use of designated routes for the Proposed Development is consistent with Project Curium and many other major projects.
NO.1.5	Question to the Applicant:
	Noise monitoring data
	The Applicant's post hearing notes for ISH3 [REP3-050] provides a response to Actions 5 and 13 providing additional information in respect of noise monitoring at ML2, ML15, ML26, ML28, ML29, ML41 and ML43. Explain why ML2 would not be affected by reflections from the low walls photographed and why ML41 would not be affected by reflections from the tree shown directly behind the sound level meter. Explain why Table 4.4 of ES Appendix 16.1 [AS-096] states that ML2 and ML15 were used to inform construction noise assessments, whereas the ambient noise monitoring data and survey sheets [AS-120] states that only ML15 was used.
	Response:
	With reference to the methodology for calculating the influence of reflection for outdoor noise propagation in ISO 9613 (Ref 2), it is considered that the contribution of reflections from the low walls near ML2 and the tree near ML42 can be neglected. This is due to:
	a. for both ML2 and M42, the low sound reflection coefficient of these predominantly open structures;
	b. for both ML2 and ML42, the relatively small dimensions of the reflective surfaces; and
	c. for ML2 there is no specular reflection path between the source and receiver.
	ML2 was included in Table 4.4 of Appendix 16.1 of the Environmental Statement [AS-096] erroneously. This will be recorded in an update to the Errata Report [REP1-015] to be submitted at Deadline 5. The Ambient noise monitoring data and survey sheets [AS-120] document is correct that only ML15 has been used in the construction noise assessment.
NO.1.6	Question to the Applicant:
	 Construction traffic - data The ExA has identified several apparent discrepancies between the traffic data set out in ES Chapter 18 [AS-030] and data referenced in Appendix 18.3 [APP-130, Table 4.1], the noise assessment [REP1-003, Chapter 16] and air quality assessments [AS-028, Appendix 7.1, Table 3.22]. Specifically, the vehicle movements presented in: • Table 4.1 vs ES paragraph 18.9.4 vs ES 16.9.71 vs Table 3.22; • Table 4.1 vs ES paragraph 18.9.45 vs ES paragraph 16.9.71 vs Table 3.22; and • Table 4.1 vs ES paragraph 18.9.102 vs ES paragraph 16.9.71 vs Table 3.22.

PINS ID	Question / Response				
	Provide confirmation of the where relevant.	correct vehicle movement num	nbers, taking into account any v	variations due to the transpor	t rescoping work, and up
	Response:				
	Differences between Tabl	e 4.1 of Appendix 18.3 of the	Environmental Statement [A	PP-130] and traffic data se	t out in ES Chapter 18
	The construction traffic data information is presented in total vehicles for each quar produce Inset 18.1 of Chap original quarter year values to multiply these by two to a	a for external activity was provi a visual form in Inset 18.1 of C ter by 65 (the typical number of ter 18 of the Environmental S that were provided are used to establish the estimates for traffi	ded as the number of vehicles hapter 18 of the Environment f working days in a quarter). In Statement [AS-030] were amal o create the figures that are pre- ic movements on the highway r	visiting the site for each quar al Statement [AS-030]. The Appendix 18.3 of the Environ gamated to show the annual esented in Table 4.1. Since the network.	rter year period when con e daily rate shown in that onmental Statement [A I figures that are displayed nese values are for vehic
	Differences between traff	ic data set out in Environmer	ntal Statement Chapter 18 [As	S-0301 and Environmental \$	Statement Chapter 16 [
	The construction traffic nun an earlier calculation iterati This will be recorded in an	nbers listed in paragraphs 16.9 on. The final calculation iteratio update to the Errata Report [R	.71, 16.9.73 and 16.9.75 of Ch on is provided in the table below REP1-015] to be submitted at D	apter 16 of the Environmen /, which results in the same of eadline 5.	tal Statement [REP1-00 conclusions as those pre
		Number of HGVs (earlier calculation iteration)	Number of HGVs (final calculation)	Resulting noise increase (earlier calculation iteration)	Resulting noise increase (final calculation)
	Assessment Phase 1	97	100	0.4dB	0.4dB
	Assessment Phase 2a	198	171	0.5dB	0.5dB
	Assessment Phase 2b	127	108	0.6dB	0.5dB
	Differences between traff The construction traffic nois identify likely significant effe peak construction calendar	ic data set out in Environmer se assessment represents a rea ects. This differs from the air qu year from each phase, conside	ntal Statement Chapter 16 [RI asonable worst-case, so constr uality assessment, which uses t ered to be the reasonable wors	EP1-003] and Appendix 7.1 uction traffic movements for the annual construction traffic t-case for the air quality asse	of the Environmental s the average day during t c movements (annual av essment.
NO.1.7	Question to the Applican	:			
	Future baseline noise lev The operational traffic noise the boundary. Explain how reduce the noise mitigation	els e and fixed plant assessments the monitoring and mitigation a requirements in future scenario	rely on future assessments to o approach would ensure that 'cre os.	conclude whether noise insul eep' in the baseline noise lev	ation would be required els (due to an expanded
	Response:				

pdate any dependent assessments

[AS-030]

nstruction would be taking place. That t diagram is obtained by dividing the **\PP-130]**, the quarterly figures used to ed as the histogram in Inset 4.1. The cles visiting the Site it was necessary

[REP1-003]

03] were mistakenly transcribed from esented in **Chapter 16 [REP1-003]**.



Statement [AS-028]

the peak quarter period are used to verage daily traffic (AADT)) from the

and the noise levels to be achieved at l airport) would not avoid, limit or

PINS ID	Question / Response
	As it is not possible to measure the situation with and without the Proposed Development in a given future year, eligibility for the operational tradetermined based on modelling and a comparison of the modelled Do-Minimum to the modelled Do-Something scenario. The Do-Minimum scenario without the Proposed Development and so is not influenced by changes in the baseline noise levels due to an expanse scenario will be updated based on traffic surveys and monitoring of traffic volumes. As this monitoring is based on traffic volume, not noise level baseline noise level. This mechanism for remodelling is described in Section 4.2 of Appendix 16.2 of the Environmental Statement [APP-11]. For fixed plant noise, the rating level design objective in the Fixed Noise Management Plant [TR020001/APP/5.02] has been updated to be 1 sound level for Deadline 4. This would avoid items of fixed plant themselves contributing to a potential increase in background sound level over always that the surveys to determine the background sound levels for the relevant assessment criteria would be undertaken at a single point in of the Proposed Development, rather than being repeatedly measured over time which could allow for potential gradual increases in backgrourd increases in backgrourd sound levels are established using up to date information, the surveys used to define the background sound level sound level sound levels are established using up to date information, the surveys used to define the background sound level sound levels are established using up to date information, the surveys used to define the background sound level sound levels are established using up to date information, the surveys used to define the background sound level sound levels are established using up to date information, the surveys used to define the background sound level sound level sound levels are established using up to date information, the surveys used to define the background sound level sound levels are established using up to date information, the su
	detailed design of the fixed plant systems, or before 12 months has passed since serving notice on the relevant planning authority under article first.
	2013 baseline comparison Paragraph 5.58 of the Airports National Policy Statement (ANPS) requires that <i>"The noise mitigation measures should ensure the impact of air possible, reduced compared to the 2013 baseline assessed by the Airports Commission"</i> . Acknowledging that the Airports Commission focuse on the response in ISH3 post hearing submission [REP3-050] explaining how the Proposed Development otherwise meets this policy requirem <i>You may wish to link the answer to this question with the answer to question NO.1.9.</i>
	Response:
	The overall aviation noise objective from the Aviation Policy Framework (Ref 3) through to the Overarching Aviation Noise Policy Statement (O possible reduce, the total adverse impacts on health and quality of life from aviation noise. The evolution of this objective is described in Section Development complies with this objective is summarised in Section 3 of Commentary on the Overarching Aviation Noise Policy [REP1-012 OANPS confirms the government's policy that "We consider that "limit, and where possible reduce" remains appropriate wording. An overall reduce desirable, but in the context of sustainable growth an increase in total adverse effects may be offset by an increase in economic and consumer there is an increase in total adverse effects, "limit" would mean to mitigate and minimise adverse effects, in line with the Noise Policy Statement
	As described in the Planning Statement [AS-122] , the embedded noise management measures as secured by the Noise Envelope within the Framework [REP3-017] have been developed so that, in combination with the compensatory mitigation measures for the Proposed Developm Measures and Community First [REP2-005]), they meet the NPSE and the aviation policy objective to limit, and where possible reduce, the t quality of life from aviation noise.
	Whilst the Airports National Policy Statement (ANPS, Ref 5) has no effect for the Proposed Development and paragraph 5.58 of the ANPS is a Commission, the ANPS is an important and relevant consideration (as confirmed in paragraph 1.12 of the ANPS) and paragraph 5.58 provides objective should be tested, at least in part, in relation to a historic baseline. The footnote to ANPS paragraph 5.58 (footnote 155) clarifies that the defined by the 54dBL _{Aeq,16h} daytime contour.

affic noise insulation scheme will be enario is the scenario assessed in the nded airport. The Do-Something els, it is not affected by changes in [1].

10dB below the L_{A90} background er time. Furthermore, the intention was n time, at the time of detailed design nd sound levels over time and hence s follows:

evels will be carried out at the time of e 44(3) of the DCO, whichever comes

rcraft noise is limited and, where sed specifically on Heathrow, expand nent.

DANPS, Ref 4) is to limit, and where on 2 and how the Proposed **2]**. It is important to note that the eduction in total adverse effects is or benefits. In circumstances where int for England." (NPSE).

e Green Controlled Growth nent (Draft Compensation Policies total adverse impacts on health and

specific to Heathrow and the Airports es clarity that the aviation policy the 2013 baseline for this test is

PINS ID	Question / Response	2						
	As the 2013 baseline i baseline to use. This i Consented baseline in	is specific to Heathrow a s why, for aircraft air an n the sensitivity test).	and the Airports Comm d ground noise, the as	nission, it is consider sessment compares	ed that the 2019 b the Do-Something	aseline used in the scenario in each y	Environmental S year to the 2019	
	The results of this con 7.9 of the same apper	nparison are presented ndix), show that for the o	in Table 12.7, 12.9 and davtime 54dBLAeg 16h co	d 12.10 of Appendix ontour:	16.1 of the Envir	onmental Statem	e nt [AS-096] and	
	a, by co	mparison to the 2019 A	ctuals baseline, the ad	verse impacts on he	alth and quality of	life from aviation no	oise are limited ar	
	b. by co phase	omparison to the 2019 es;	Consented baseline, th	ne adverse impacts	on health and qua	lity of life from avia	ation noise are li	
	c. by co asses	omparison to 2016 actu ssment phases.	ials (see response to	NO.1.9), the advers	e impacts on hea	th and quality of l	ife from aviation	
	Though the 2013 base (45dBL _{Aeq,8h}) and SOA	eline test in the ANPS is AEL (55dBL _{Aeq,8h}) conto	defined only in terms	of daytime, a compa	rison for night-time	has also been un	dertaken and sho	
	a. by co	mparison to the 2019 A	ctuals baseline, the ad	verse impacts on he	alth and quality of	life from aviation no	oise are limited ar	
	b. by co 2a;	omparison to the 2019 C	consented baseline, the	e adverse impacts o	n health and quality	y of life from aviation	on noise are limite	
	 d. by comparison to the 2019 Consented baseline, the adverse impacts on health and quality of life from avian phase 1 and 2b; 							
	 e. by comparison to 2016 actuals (see response to NO.1.9), the adverse impacts on health and quality of life from aviation noise a phase 2a; 							
	f. by co asses	omparison to 2016 actu ssment phase 1 and 2b	als (see response to .	NO.1.9), the adverse	e impacts on heal	h and quality of lif	e from aviation r	
	Data for the above cor	mparisons are summari	sed in the table below.					
	Noise contour	Population						
		2016 Actuals	2019 Consented	2019 Actuals	2027 DS	2039 DS	2043 DS	
	Daytime	<u> </u>						
	54dBL _{Aeq,16h}	18,300	19,050	21,650	15,500	13,850	16,500	
	Night-time							
	45dBL _{Aeq,8h}	55,050	55,150	67,800	55,850	54,950	62,800	
	55dBL _{Aeq,8h}	3,100	3,100	4,950	3,800	2,600	3,250	
	With respect to the nig noise insulation schen OANPS, the total adve	pht-time adverse effects ne, with its night-time el erse effects of noise are	, as noted in the Planr igibility, will avoid all si counterbalanced by th	ning Statement [AS gnificant effects on h ne increased econor	-122] and Comme nealth and quality on nic and consumer	ntary on the Over of life during the nig benefits delivered l	arching Aviation ht-time. Furthern by the Proposed	
NO.1.9	Question to the Appl	licant:						

Statement is the appropriate historic Actuals baseline (or the 2019

d (together with the tables in Section

and reduced for all assessment phases; imited and reduced for all assessment

noise are limited and reduced for all

ows that for the night-time LOAEL

and reduced for all assessment phases; ted and reduced for assessment phase

mited, but not reduced, for assessment

are limited and reduced for assessment

noise are limited, but not reduced, for



on Noise Policy [REP1-012], the more, in line with the principles of the Development.

PINS ID Question / Response

2019 actuals baseline

ES Chapter 16 [REP1-003, paragraph 16.9.8] explains that the 2019 actuals baseline determines the number of properties last experiencing significant adverse effects on health and guality of life. This is used for comparison purposes against future scenarios. Explain how the figures for changes in total population exposure would differ if the last year of noise contour compliant operation (2016) were adopted as a comparator rather than the 2019 actuals or consented baseline datasets.

Response:

The 2016 actuals fleet has been modelled in AEDT following the modelling methodology described in Appendix 16.1 of the ES [AS-096] and population analysis of noise contours is provided in the tables below.

Daytime L _{Aeq,16h} dB Noise Contour	2016 Actuals Population
51	36,400
54	18,300
57	10,400
60	4,200
63	1,250
66	0
69	0

Night-time L _{Aeq,8h} dB Noise Contour	2016 Actuals Population
45	55,050
48	20,750
51	10,850
54	4,650
55	3,100
57	1,500
60	0
63	0

A summary of population within the assessment Phase 1 2027 Lowest Observed Adverse Effect Level (LOAEL), Significant Observed Adverse Effect Level (SOAEL) and Unacceptable Adverse Effect Level (UAEL) contours is provided in table below for the 2016 Actuals Baseline, Do-Minimum (DM) and Do-Something (DS) scenarios. The figures are comparable with 2019 Consented baseline population analysis in Table 12.7 of Appendix 16.1 of the Environmental Statement [AS-096] with the only identified difference being:

a. 100 fewer people being no longer above the daytime LOAEL by comparison to 2016 actuals; and

g. 100 additional people being newly exposed to noise levels above night-time LOAEL by comparison to 2016 actuals.

No change in population exposed to noise levels above SOAEL or UAEL are identified. Cells were there are differences compared to Table 12.7 of Appendix 16.1 of the Environmental Statement [AS-096] are highlighted and the equivalent number from Table 12.7 is included in brackets.

PINS ID **Question / Response**

	Total Population					
Noise exposure	2016 Actuals	2027 DM	2027 DS	Change DS – 2016 Actuals	Change DS - DM	
Daytime						
Above LOAEL and below SOAEL	35,150	25,000	31,600	-3,550 (-3,650)	6,600	
Above SOAEL and below UAEL	1,250	50	450	-800	400	
Newly above the SOAEL in DS compared to the 2016 Actuals Baseline			0			
Above UAEL	0	0	0	0	0	
Night-time						
Above LOAEL and below SOAEL	51,950	38,350	52,050	100	13,700	
Above SOAEL and below UAEL	3,100	2,100	3,800	700	1,700	
Newly above the SOAEL in DS compared to the 2016 Actuals Baseline			700			
	0	0	0	0	0	

A summary of population within the Phase 2a 2039 LOAEL, SOAEL and UAEL contours is provided in table below for the 2016 Actuals baseline, DM and DS scenarios. The figures are comparable with 2019 Consented baseline population analysis in Table 12.9 of Appendix 16.1 of the Environmental Statement [AS-096] with the only identified difference being:

a. 100 fewer people being no longer above the daytime LOAEL by comparison to 2016 actuals; and

h. 100 additional people being newly exposed to noise levels above night-time LOAEL by comparison to 2016 actuals.

No change in population exposed to noise levels above SOAEL or UAEL are identified. Cells were there are differences compared to Table 12.7 of Appendix 16.1 of the Environmental Statement [AS-096] are highlighted and the equivalent number from Table 12.7 is included in brackets.

PINS ID Question / Response

	Total Population						
Noise exposure	2016 Actuals	2039 DM	2039 DS	Change DS – 2016 Actuals	Change DS - DM		
Daytime							
Above LOAEL and below SOAEL	35,150	20,100	30,800	-4,350 (-4,450)	10,700		
Above SOAEL and below UAEL	1,250	0	200	-1,050	200		
Newly above the SOAEL in DS compared to the 2016 Actuals Baseline			0				
Above UAEL	0	0	0	0	0		
Night-time							
Above LOAEL and below SOAEL	51,950	32,850	52,350	400 (300)	19,500		
Above SOAEL and below UAEL	3,100	1,500	2,600	-500	1,100		
Newly above the SOAEL in DS compared to the 2016 Actuals Baseline			0				
	0	0	0	0	0		

A summary of population within the Phase 2b 2043 LOAEL, SOAEL and UAEL contours is provided in table below for the 2016 Actuals baseline, DM and DS scenarios. The figures are comparable with 2019 Consented baseline population analysis in Table 12.10 of Appendix 16.1 of the Environmental Statement [AS-096] with the only identified difference being:

a. 100 additional people being newly exposed to noise levels above daytime LOAEL by comparison to 2016 actuals; and

i. 100 additional people being newly exposed to noise levels above night-time LOAEL by comparison to 2016 actuals.

No change in population exposed to noise levels above SOAEL or UAEL are identified. Cells were there are differences compared to Table 12.7 of Appendix 16.1 of the Environmental Statement [AS-096] are highlighted and the equivalent number from Table 12.7 is included in brackets

	Total Population				
Noise exposure	2016 Actuals	2043 DM	2043 DS	Change DS – 2016 Actuals	Change DS DM
Daytime					
Above LOAEL and below SOAEL	35,150	19,950	38,250	3,100 (3,000)	18,300
Above SOAEL and below UAEL	1,250	0	500	-750	500
Newly above the SOAEL in DS compared to the 2016 Actuals Baseline			0		
	0	0	0	0	0
Above UAEL	0	0	0	0	0
Above UAEL Night-time	0	0	0	0	
Above UAEL Night-time Above LOAEL and below SOAEL	51,950	32,400	59,550	7,600 (7,500)	27,150
Above UAEL Night-time Above LOAEL and below SOAEL Above SOAEL and below UAEL	51,950 3,100	32,400 1,350	59,550 3,250	7,600 (7,500) 150	27,150 1,900
Above UAEL Night-time Above LOAEL and below SOAEL Above SOAEL and below UAEL Newly above the SOAEL in DS compared to the 2016 Actuals Baseline	51,950 3,100	32,400 1,350	59,550 3,250 150	7,600 (7,500) 150	27,150 1,900

ES Appendix 18.2 [APP-129, Table 1.4] highlights an increase in 2039 PM peak flows of 825.7%. Confirm whether this is a typographic error or explain what the cause of this increase is. Similarly, Brendon Avenue (between Eaton Green Road and Fermor Crescent; and between Fermor Crescent and Crawley Green Road) is predicted to experience increases in 2039 AM (07:00-10:00) peak flows of 140-156% and PM (16:00-19:00) peak flows of 149-163%. For both locations in light of more than doubling traffic flows, which

PINS ID	Question / Response
	equates to at least 3dB increase in noise levels, explain whether there is potential for a significant adverse noise effect requiring mitigation and would it be secured?
	Response:
	Lalleford Road between Eaton Green Road and Lyneham Road The 2039 data shows an increase of 825.7% in the PM peak hour. This increase is a function of the very low future baseline flow (31 vehicles) is to 291 vehicles with the Proposed Development. Conversely, it is noted that in the AM peak there is a similar reduction from 236 vehicles in the the Proposed Development. When considered across the day, the Annual Average Daily Traffic (AADT) flows on Lalleford Road between Eator are forecast to increase by around 19% in 2039. This increase in traffic flow is taken into account in the surface access noise modelling and con of less than 1 dB so no significant adverse noise effects are identified as a result of traffic increases on Lalleford Rd.
	Brendon Avenue (between Eaton Green Road and Fermor Crescent; and between Fermor Crescent and Crawley Green Road) The 2039 percentage increases referred to in NO.1.10 are correct but relate to the AM (08:00-09:00) and PM (17:00-18:00) peak hours. When flows (AADT) increase by between 63%-75%. Due to the low levels of baseline traffic and the low likelihood of an adverse environmental effect of Appendix 18.1 of the Environmental Statement [APP-128], Brendon Avenue was not considered within the environmental assessments. A 75% would lead to an increase in road traffic noise of around 2-2.5 dB, which coupled with the low volume (and therefore low road traffic noise) to significant adverse noise effects from road traffic.
NO.1.11	Question to the Applicant:
	Future fleetmix – larger aircraft Explain whether use of larger aircraft in future scenarios would lead to different modes of operation at the airport e.g. due to runway length or flie effect the conclusions of the ES?
	Response:
	The runway mode would not be impacted by any use of larger aircraft as the mode is dictated by the wind direction, not the aircraft type. Any as their ability to use the runways at Luton are based on the capabilities of these aircraft to use the runway in either direction so that, regardless of take off and land into the wind. There is therefore no impact on the conclusions of the Environmental Statement.
NO.1.12	Question to the Applicant:
	Future fleetmix – assumptions regarding new generation aircraft REP1-023, 8.31 states in response to RR-1416 that fleetmix comprises 31% new generation aircraft in 2023, whereas in response to RR-0226 which figure is correct and amend as necessary.
	Response:
	Both figures are correct but are quantifying the proportion of new generation aircraft in different ways, 31% refers to the actual position in Augus reflects the expectation for the full year 2023 based on airlines stated intentions to the airport operator and their known schedules.
NO.1.13	Question to the Applicant:
	Future fleetmix assumptions – next generation

I if so, what would this be and how

in the PM peak hour which increases e future baseline to 27 vehicles with on Green Road and Lyneham Road onstitutes a road traffic noise increase

n considered across the day traffic t, in accordance with paragraph 2.2.3 An increase in traffic volume of 63%e) on Brendon Avenue would not lead

light profiles and if so how would this

ssumptions about larger aircraft and of the wind direction, the aircraft could

a figure of 40% is used. Confirm

ust 2023 as stated, whereas 40%

PINS ID	Question / Respo	nse					
	With reference to CAP1766 'Emerging Aircraft Technologies and their potential noise impact', explain why an assumption of next generation r same as new generation aircraft is robust.						
	Response:						
	CAP1766 'Emerging Aircraft Technologies and their potential noise impact' (Ref 6) was one of the Civil Aviation Authority publications linked to aviation strategy consultations (Ref 7), along with CAP1731 Aviation Strategy: Noise Forecast and Analyses (Ref 8). CAP1766 provides high implications of emerging aircraft technologies such as electric aircraft, supersonic aircraft, unmanned aircraft systems and spacecraft. Of thes are likely to have the potential for use at London Luton Airport in significant numbers. Whilst the report notes that there is a risk of potential ac (which could vary with noise levels potentially reduced on departure but increased on arrival), no definitive statements are made and the unce						
	Published around t modelling out to 20 per year reduction consistent with the Assumptions on re	he same time and as p 50, with consideration due to future aircraft typ assumptions applied in ductions in noise from r	art of the same aviation of the noise impacts of bes, based on a review the sensitivity test fo next-generation aircra	on strategy consultations of future aircraft types. Fo w of novel aircraft noise or next-generation aircraft aft are only employed in a	s, CAP1731 Aviation S or these long-term for technology by the Inte t presented in Section a sensitivity test.	Strategy: Noise Fore ecasts, the Civil Avia ernational Civil Avia 12.6 of Appendix	ecast and Ana ation Authority tion Organizat 16.1 of the Er
	For the reasons de reasonable worst-	scribed above, it is the ase, as the assumptior	refore considered that I means that Noise Er	t the assumption that ne nvelope Limits are set to	xt-generation aircraft a be equivalent to thos	are no louder than n e of new-generation	iew-generation aircraft in an
NO.1.14	Question to the Applicant: Future fleetmix assumptions – corrections ES Appendix 16.1 [AS-096, Table 6.2] sets out corrections applied to different aircraft but excludes the Boeing 737 max on the basis that it Boeing 737 max aircraft are operating at Luton, provide monitoring data to support the use of the default data and profiles in the Aviation Er						asis that it wa Aviation Envir
	Response: Measured noise data collected over the 2022 92-day summer period from monitoring locations NMT1 and NMT2 has been used to support profiles for noise predictions in the AEDT noise model. NMT1 measures noise from both approaches and departures, and NMT2 measure of the measured 50 th percentile Sound Exposure Level (SEL) from individual B737Max movements and a comparison against predicted E presented in the table below. The results show a good correlation with predicted B737Max SEL predictions being within 1dB of measured						to support the measures no edicted B737N neasured SEL
	Monitoring Location	Measurement Data Samples	Operation	Measured 50th Percentile SEL dB	Predicted SEL dB	Difference dB	
	NMT1 A	126	Approach	83.2	84.0	+0.8	-
	NMT1 D	82	Departure	81.8	82.7	+0.9	\neg
	NMT2	118	Departure	81.0	81.6	+0.6	
NO.1.15	Question to the A Future fleetmix as Confirm how the m	pplicant: ssumptions – load fac odelled flight departure	tors profiles [AS-096, Sec	ction 6] in future years a	ccount for potential ch	anges in load factor	rs due to incre
	Response:				-	-	

oise levels being less than or the

o the Department for Transport's level commentary on noise e technologies, only electric aircraft verse noise impacts of electric aircraft rtainties are noted.

alyses provides forecast noise y assumed either a 0.1dB or 0.3dB tion (Ref 9). This assumption is **nvironmental Statement [AS-096].**

n aircraft is considered robust and a y case.

as not operating in 2019. Now that ronment Design Tool (AEDT).

e use of default B737Max data and bise from departures only. A summary Max noise levels in AEDT are _s.

eased passenger numbers.

PINS ID	Question / Response
	Aircraft weight is accounted for in the AEDT noise model through the setting of 'stage lengths'; the higher the stage length, the further the deparences its destination. AEDT assumes a load factor of 65% when determining aircraft weights for each stage length. Aircraft are influenced by longer to ascend and take long to attain speed. Aircraft weight is inherently considered in the validation process through consideration of depar profiles as presented in Inset 6.24 to 6.29 of Appendix 16.1 of the Environmental Statement [AS-096]. If aircraft load factors were to increas noise model validation as secured in the Aircraft Noise Monitoring Plan [REP3-023] would capture these aircraft weight increases through a profiles.
NO.1.16	Question to the Applicant:
	Conversion between Integrated Noise Model (INM) and AEDT model ES Appendix 16.1 [AS-096, section 6.16] explains that INM contour area limits show a relatively good fit with AEDT contour area limits, althoug departure routes. This is assumed to be acceptable on the basis that 2019 radar data shows good correlation between departure profiles on be for other years to support this assumption?
	Response:
	A response to this question has been provided in Applicant's response to Written Questions - Noise & Vibration - Appendix A - 1.16 Con Model (INM) and AEDT model [TR020001/APP/8.74].
NO.1.17	Question to the Applicant:
	Cumulative impacts ISH3 post hearing submission [REP3-050] implies that noise of overflight from multiple airports was addressed in ES Chapter 21 [AS-032]. Cal
	assessment is provided?
	Response:
	The Cumulative Effects Assessment (CEA) presented in Chapter 21 of the Environmental Statement [AS-032] considers the potential cumul other environmental impacts) from the Proposed Development with noise from other developments (including airports). A 'Zone of influence' (Z significant cumulative effects could occur is defined for each environmental topic (see Table 21.9 of Chapter 21 [AS-032]). The ZOI for the noise based on the noise study area, which as noted in Section 3 of Chapter 16 [REP1-003], incorporates the largest of the air noise LOAEL and is a study area.
	The potential for cumulative effects from other airports was carried out following the methodology described in Section 21.3 of Chapter 21 [AS -Gatwick, Stansted and London City airports as the proposals at these airports met selection criteria and were raised during consultation, as evil Long List provided in Appendix 21.1 [APP-140] . The table in Appendix 21.1 reports the findings of the screening exercise and concludes that of through spatial overlap of the wider waste and economics ZOI of the Proposed Development and the total ZOI of the Heathrow Expansion only Short List [APP-141] of other development to be considered in the CEA. The other airports were screened out as they are unlikely to result in a including from noise. Table 21.10 [AS-032] reports the finding of the CEA for the Proposed Development and those other developments on the methodology only waste (page 87) and economics (page 52) needed to consider cumulative effects with Heathrow as the only potential overlap cumulative effects are reported, no other environmental aspects including noise need to consider this further in the CEA however noise has cla The assessment therefore concludes that there are no significant cumulative effects from other airports.
NO.1.18	Question to the Applicant:
	Cumulative impacts

arting aircraft needs to travel before it y load factor as heavier aircraft take arture altitude and ground speed se in future, the annual updates to the analysis of altitude and ground speed

gh there is some difference for 25 oth runways. Is radar data available

version between Integrated Noise

in the Applicant signpost to where the

Ilative effects of noise (as well as ZOI) within which potentially ise cumulative assessment is defined shown on Figure 21.1 **[APP-164]**.

5-032] and included Heathrow, videnced by their inclusion on the only Heathrow meets the criteria y, and is therefore considered on the significant cumulative effects, e Short List **[APP-141]**. Following the up of ZOIs and no significant arified this on page 85 of **[AS-032]**.

PINS ID	Question / Response
	The Applicant's post hearing submission for ISH3 [REP3-050] states that it is technically possible but not appropriate to add dB levels from difference in how noise levels are experienced for example 'aircraft noise which is intermittent'. Given that the assess the LAeq,16hour because it is correlated with annoyance and that consideration of traffic noise is based on the LA10,18hour metric (converted to a LAE annoyance, provide further justification for not combining LAeq noise levels at receptors close to the airport. In the absence of a relevant combine ES significance criteria could not be used as a comparator.
	Response:
	Whilst multiple noise metrics and noise sources can be correlated with annoyance, research shows that the human response to different noise absolute noise level and noise change). The World Health Organization, for example, note that "As the main body of evidence on environmental specific impacts of noise on health outcomes and does not incorporate combined exposure effects of multiple noise sources or other pollutants, provide recommendations for each source of noise specifically. No attempt has been made to combine noise from multiple sources for any parts.
	This is why it is standard practice to use different assessment criteria for different noise sources (for example see Tables 16.13, 16.14, 16.16 a Environmental Statement [REP2-032] which shows different assessment thresholds and change criteria for aircraft noise and road traffic noise Government in setting the LOAEL assessment threshold for aircraft noise (Ref 11) is specific to aircraft noise and cannot be applied to road traffic 12) and methodologies for monetising the health effects of noise (WebTAG) require that noise sources are modelled, mapped and assessed set
	For the reasons set out above the significance criteria defined in Chapter 16 of the Environmental Statement [REP2-032] are specific to the reasons be applied to combined noise sources.
NO.1.19	Question to the Applicant:
	The Noise Insulation Regulations 1975 Can the Applicant explain how the provisions of The Noise Insulation Regulations 1975 apply to the Proposed Development and whether this p the Applicant to those assessed in the ES.
	Response: Under the Noise Insulation Regulations 1975 (Ref 13) the Applicant has a duty to carry out insulation work or to offer grants for the qualifying criteria are met when either a new highway or an additional carriageway (located completely outside the extents of any existing highway respect to the Proposed Development, this applies only to the Airport Access Road (AAR), and the Applicant would be required to complete a Massessment within 6 months of opening of the AAR using the as built scheme design. However, modelling used to inform Chapter 16 of the En 003] indicates that no residential properties are likely to meet all four of the qualifying criteria for noise insulation under the Regulations.
NO.1.20	[The Applicant notes that this question is directed to Luton Borough Council, however the Applicant considers that a response from further clarification]
	Question:
	Luton Borough Council Environmental Protection - planning and noise guidance Explain the status of the Luton planning and noise guidance and the extent to which the Proposed Development should be subject to achieving outdoor amenity.
	Response:
	The Applicant provided commentary on the 55dBLAeq,1h criteria in Applicant's Post Hearing Submission - Issue Specific Hearing 3 (ISH3 6.5.3.
NO.1.21(a)	Question to the Applicant:

erent noise sources together as this sment of aircraft noise is based on eq,16hour value), also correlated with ned noise standard, explain why the sources is different (both in terms of al noise still focuses on source-, however, the current guidelines rticular health outcome." (Ref 10) and 16.17 of Chapter 16 of the se. The research used by the affic noise. UK specific legislation (Ref eparately. noise source in question and cannot places any additional obligations on e work at eligible properties if the way) is to be constructed. With Noise Insulation Regulations nvironmental Statement [REP1the Applicant will help provide the 55 dBLAeq (1hr) criteria for 3) [REP3-050] in paragraph 6.5.1 to

PINS ID	Question / Response
	In response to Action Point 2 for ISH3 [REP3-050, Table.1.1], the Applicant stated that the ES had assessed a reasonable worst-case assumpt moved by traditional trucks /dump trucks. For the avoidance of doubt, provide information to confirm that a static conveyor system would be qui trucks.
	Response:
	Standard data sources can be used to confirm that a static conveyor system would be quieter than traditional trucks/ dump trucks. For example Consent Order Environmental Statement (Ref 14) provides Sound Power Levels of 104dB for a conveyor belt drive unit and 90dB for the convert (Ref 15) and measurement data. These sound power levels are lower than those for HGVs (108dB) and dumpers (109dB) used in the calculation Table 5.3 of Appendix 16.1 of the Environmental Statement [AS-096] .
NO.1.21(b)	Question to the Applicant:
	In response to Action Point 14 for ISH3 [REP3-050, Table 1.1], the Applicant referenced the Transport Assessment Appendix F but did not provold of doubt, state the carriageway width assumptions used to model traffic noise on Vauxhall Way.
	Response: In modelling traffic noise, the drawings in Appendix F of the Transport Assessment [APP-201] were incorporated into the noise is appropriately using existing mapping as a reference. For Vauxhall Way, once it has been widened to a dual carriageway, this process resulted approximately 7 metres. However, this value varies along the length of the road with carriageways being slightly wider north of Crawley Green Eaton Green Road and widening further close to junctions.
NO.1.22	Question to the Applicant:
	Airline orders In response to Action Point 21 for ISH3 [REP3-050, Table 1.1], the Applicant provided three figures extracted from airline presentations. No expansion are represented by the based at Luton or how the information provided has informed the development of the future fleet forecasts. The ExA requests explanation of how this information has informed the future forecast and confirmation from the airlines that the future fleet forecasts are represented operations.
	Response: The Applicant cannot be certain of the rate at which key airlines will base their new aircraft at London Luton Airport. However, all the airport and expected to continue to deploy more of their fleet to Luton.
	In the case of Wizz Air, the airline has already confirmed that the base at Luton will be 100% new generation by 2025 (see Appendix B) and, sin new generation by 2027 (as per the information provided in REP3-050 , Figure 1), the Applicant has a high degree of confidence that this major in the near future at Luton when accounting for some inbound services from other bases in addition to the based operations.
	Following the submission of REP3-050 , easyJet has also announced a further order for 157 new generation aircraft on top of those already ord 100 on firm order above this (see Appendix C).
	Ultimately, airlines will continue to replace their older aircraft because there is an economic imperative to do so in order to reduce their own operations, as older aircraft burn more fuel and become increasingly expensive to maintain. Therefore, not updating fleets makes airlines uncomparing airline sector that makes up the vast majority of operations at the airport. Low fares airlines will typically replace older aircraft at an earlier stage importance placed on keeping costs down within the business and this can be seen historically as airlines, such as Ryanair and easyJet, are all

tion that excavated material would be lieter than traditional trucks/ dump

e, the Thames Tideway Development reyor based on British Standard 5228 tion of noise from haul routes from

vide actual widths. For the avoidance

modelling software and scaled I in carriageway widths of Road, slightly narrower south of

planation is provided as to which that the Applicant provide a detailed entative of the proposed airline

three of the largest airlines are

ince the airline will be at nearly 100% r operator will be all new generation

dered, and options to place another

erating costs and meet sustainability betitive, particularly in the low fares ge than other airlines due to the already on their second generation of

PINS ID	Question / Response
	aircraft and now introducing their third generation each (having retired all their first generation aircraft some years ago). This pattern can be se generation aircraft on order by low fares airlines in Europe and globally.
	The Applicant's approach to future fleet forecasts has, therefore, been based on specific known factors (such as Wizz Air's 100% new generati expectations of how other aircraft on order by the airlines may be deployed, which have been considered taking into account factors such as the airlines (10-20 years for most low fares airlines) and general industry trends, orders and announcements. The fleet mixes adopted for assessing Envelope Design Group, which included airline representatives and, in specific consultations with the airlines, the information has been shared Applicant confidence that the overall rate of fleet replacement assumed in the forecasts is robust.
	The rate of fleet transition in the early years is broadly consistent with those presented at the Bristol Airport Inquiry (69% new generation by 20 the Planning Inspectorate in that case as being <i>"generally sound"</i> (Appeal Decision APP/D0121/W/20/3259234, Page 37, Para 224).
	The Applicant believes that the fleet mix presented is reasonable and notes that there has been no substantive challenge to this from any other deployment of new generation aircraft is slower than projected at London Luton Airport then the airport will not be able to grow by virtue of the I Green Controlled Growth (GCG). In order to take advantage of the scope to grow, the airlines will have a motivation to deploy newer types at the stringent limits which are being proposed. The principles that growth would be controlled by environmental limits if the fleet mix was not in line Planning Inspectorate at the Bristol Airport Inquiry (Appeal Decision APP/D0121/W/20/3259234, Page 49, Para 288).
NO.1.23	Question to the Applicant:
	Historical flight paths In response to Action Point 29 for ISH3 [REP3-050, Table 1.1], the Applicant provided flightpath maps for the period 2017-2023. Confirm wheth main flight corridors (ie Olney, Compton and Detling) for the 3rd quarter can be provided on a single plan to enable comparison of the flightpaths provided back to 2013. Section 1 of the document also contains a number of reference errors. Please provide any updated information with cro
	Response:
	Issue Specific Hearing 3 Action 29 Response Paper - Historical Flight Path Information [REP3-075] has been updated at Deadline 4 to c provide the requested additional information. Whilst the radar track system cannot generate 'averaged data', it can generate plot density diagra the average track where the plot density is at its highest. This information has been provided for the departure flight corridors for the third quar
NO.1.24	Question to the Applicant:
	Compensation and Community First Fund - Eligibility It is noted that paragraph 5.245 of the ANPS references use of single mode easterly and westerly contours to inform eligibility for the Heathrow why average contours have been adopted for the Proposed Development and whether use of single mode contours would provide greater certa would avoid significant adverse impacts on health and quality of life from noise for affected receptors.
	Response:
	Paragraph 5.245 of the ANPS is specific to Heathrow Airport and its proposals put forward to the Airports Commission in the context of the ben runway expansion. The extension of the noise insulation scheme to include single mode contours was a voluntary commitment and not in response ANPS itself does not specify that it is a policy requirement) nor was it introduced to avoid significant adverse impacts on health and quality of line methodology for identifying significant adverse effects was defined in Heathrow's Preliminary Environmental Information Report (PEIR Graphic 'primary factors' of 92-day summer average LAeq,16h and LAeq,8h contour in line with the assessment methodology for the Proposed Development referenced in the Heathrow methodology as one of several "Additional factors: (that would reduce significant effects identified based on primary significant adverse effects were not identified based on single mode contours.

een in the large numbers of new

tion fleet by 2027) as well as he typical retirement timescales of ment were presented to the Noise d with them. This has given the

030) and accepted as reasonable by

er parties. Ultimately, if the rate of Limits being put in place through the airport in order to meet the with forecasts was confirmed by the

ther averaged data for each of the ns and whether this data can be oss references corrected.

correct the reference errors and to ams which can be used to indicate rter back to 2013.

v noise insulation scheme. Explain tainty that the Proposed Development

nefits brought about from the third bonse to policy requirements (the life. Heathrow's assessment c 17.9, Ref 16) and was based on the nt. Single mode contours are only ry factors alone)". In other words,

PINS ID	Question / Response
	Standard practice and Government noise policy (Ref 3 and Ref 17) is that noise insulation eligibility should be based on 92-day summer average criteria for the Proposed Development, in line with Government noise policy, also uses 92-day summer average LAeq contours. Single mode control the identification of, or avoidance of, significant adverse impacts on health and quality of life from noise with the Proposed Development.
NO.1.25	Question to the Applicant:
	Compensation and Community First Fund – Health and vulnerability of tenants The UK Health Security Agency (UKHSA) [RR-1546] suggests that tenants may have poor health or be considered vulnerable. The Applicant is would be taken to encourage take up of noise insulation by tenants. Explain what these proactive measures would be and how they are secure compensation scheme. Response: The Applicant has included a description of the proactive measures it would take at paragraphs 6.1.25 and 6.1.26 of the updated Draft Compe Community First [TR020001/APP/7.10] submitted at Deadline 4. As stated in paragraph 1.1.7 of the document, it would be secured via a sec the Applicant. As part of the updated document submitted at Deadline 4, the Applicant has developed the wording of the current Draft Compensation Policie [TR020001/APP/7.10] document in response to issues such as this one raised by the UKHSA in its Relevant Representation [RR-1546]. Commoise insulation by tenants is expressly set out in paragraph 6.1.49 the updated version of Draft Compensation Policies Measures and Commoise insulation by tenants is expressly set out in paragraph 6.1.49 the updated version of Draft Compensation Policies Measures and Commoise insulation by tenants is expressly set out in paragraph 6.1.49 the updated version of Draft Compensation Policies Measures and Commoise insulation by tenants is expressly set out in paragraph 6.1.49 the updated version of Draft Compensation Policies Measures and Commoise insulation by tenants is expressly set out in paragraph 6.1.49 the updated version of Draft Compensation Policies Measures and Commoise insulation by tenants is expressly set out in paragraph 6.1.49 the updated version of Draft Compensation Policies Measures and Commoise insulation by tenants is expressly set out in paragraph 6.1.49 the updated version of Draft Compensation Policies Measures and Commoise insulation by tenants is expressly set out in paragraph 6.1.49 the updated version of Draft Compensation Policies Measures and Commoise insul
NO.1.26	submitted at Deadline 4. Question to the Applicant:
	Compensation and Community First Fund – Notice period [REP2-005, paragraph 7.1.2] states that a 14-day temporary possession notice would be served on affected businesses. Provide justification for Response: Paragraph 7.1.2 of REP2-005 states: The statutory position is, once the Applicant has consent, it may serve a notice of either 14 days for temp permanent acquisition to require the owner or occupier to vacate with compensation being assessed afterwards based on the submission of a of the policy which is intended would deal with business support and para 7.1.4 goes on to state that. Depending on the specific circumstances question, the Applicant will consider a range of potential support measures. The Applicant's proposals are designed to provide flexibility and gre planning and go beyond statutory requirements. One of the offers being to agree an arrangement for an extended notice period to be given befor It should be noted that in a significant number of cases, the land identified for temporary possession will be existing public highways, verges or business. However, the updated version of the Draft DCO submitted at Deadline 4 proposes an amended period of 28 days. The Applicant beli will be sufficient so as to provide flexibility and not to cause unnecessary delay to the commencement of works on site. When business occupie business support policy will be engaged to help provide flexibility that may be required to mitigate the potential impact. This will be in the interest minimise the compensation otherwise due to the affected parties for disturbance caused.
NO.1.27	Question to the Applicant:
	Compensation and Community First Fund – Unspent funds

age L_{Aeq} contours. The assessment ontours therefore has no bearing on

suggests that proactive measures ed in the draft DCO or noise

ensation Policies Measures and action 106 agreement entered into by

ies Measures and Community First mitments to maximise the take up of nmunity First [TR020001/APP/7.10]

or this notice period.

porary possession or three months for claim. This is provided in the section s of the individual business in reater certainty for future business fore the property is acquired.

r bare land not occupied by a lieves the longer 28-day notice period iers would be directly impacted, the ests of the Applicant because it will

PINS ID	Question / Response
	[REP2-005, Section 8] describes the Community First fund. The Applicant confirmed in [REP2-035, paragraph 8.39] that unspent funds in a fin subsequent financial years, provide a revised compensation document that confirms this position and indicate how this would be secured in the
	Response:
	The Draft Compensation Policies Measures and Community First [TR020001/APP/7.10] document has been updated to confirm this at pa submitted at Deadline 4.
NO.1.28	Question to the Applicant:
	Compensation and Community First Fund - Grant application [REP2-005, Section 10] describes the administration of the Community First fund by an awards panel. Confirm how many grant applications the each year and why a £25,000 cap has been set for grants.
	Response:
	As set out at 10.1.1 and 10.1.2 of the Draft Compensation Policies Measures and Community First document [TR020001/APP/7.10], Cor an independent charitable body which would establish awards panels to consider grant applications.
	The Applicant notes the concerns raised by some Interested Parties about the potential volume of applications which could be forthcoming with reaches an annual budget of £13m.
	A cap of £25,000 has been set for the first period of Community First based on the likely fund size during the first five year period, which is not £2.5m could be allocated across 100 grants at £25,000. The Applicant notes that, based on its core passenger forecasts, as set out in the Nee be expected to reach more than £2.5m per year until 2037. Consequently, the administration of the fund would have until then to plan for future the review mechanism built into Community First allows for the grant size to be adjusted, meaning as the fund grows, so could the maximum g for larger grants in the future.
	A significant proportion of the Applicant's existing community funding programme is currently managed in this way by the Bedfordshire & Lutor their views have been sought on how the fund might be managed and their capacity to deal with high numbers of grant applications. A note fro Appendix D to this document.
NO.1.29	Question to the Applicant:
	Compensation and Community First Fund – Parked mobile homes
	Drawing on information from your current insulation provider, confirm whether parked mobile homes, such as those present near Pepperstock being insulated to a level that would ensure that effects above the Significant Observed Adverse Effect Level would be avoided.
	Response:
	The park homes near Pepperstock (Brickhill Park) and in Woodside Park are not exposed to noise levels above the SOAEL so there is no require the SOAEL are avoided for these properties. The Applicant is not aware of any parked mobile home sites within the SOAEL contour.
	Although no significant effects are identified for Brickhill Park and Woodside Park, they may be eligible for noise insulation under Scheme 4 or contours provided in Appendix A of Draft Compensation Policies and Community First document [TR020001/APP/7.10] . The Applicant's pepperstock and Woodside Park is that they are substantial permanent structures rather than parked mobile homes and would be capable of lupon meeting the eligibility criteria a survey will be carried out to determine the scope of works required taking into account specifics of the pro-

nancial year would be rolled over to ne draft DCO.

aragraph 8.1.10, and has been

he board would be able to process

mmunity First would be managed by

th a grant limit of £25,000 as the fund

t expected to exceed £2.5m. A fund of **ed Case [AS-125]**, the fund would not re growth. It should also be noted that grant size, presenting the opportunity

on Community Foundation (BLCF) and om BLCF in this regard is included at

and Woodside Park, are capable of

uirement to ensure that effects above

r 5 based on the indicative eligibility understanding of the park homes in being insulated. As with all properties, operty in question.

PINS ID	Question / Response
NO.1.30	Question to the Applicant:
	Compensation and Community First Fund – Appeal
	Confirm whether there is any right of appeal mechanism for decisions made by the Applicant, or its supplier, relating to noise insulation. If not, we where this is detailed and explain how it would be secured?
	Response:
	To achieve fairness the policy incorporates independent monitoring through the engagement of a sub-committee of the London Luton Airport Co LLACC has no executive role in the decision-making process of the airport. The aim of the LLACC is to ensure that as wide a range of views as London Luton Airport management team so that they can take account of the issues which are of concern to those using the airport, working at of the Committee is appointed by London Luton Airport Operations Limited (LLAOL), the airport operator, but is independent of the airport and the
	The proactive approach that would be adopted to the roll out of the policy will result in a constantly developing dialogue with homeowners and o changes to overcome challenges and issues arising from implementation of the policy. Roll out in these high volumes will need to remain straight Applicant believes that any formal appeal mechanism would slow this down and hinder delivery. The section 106 obligation for the Applicant to maximum take up of the noise insulation offer will drive the right behaviours to overcome genuine disputes. Common problems will be grouped a identified in engagement with the local authorities and the LLACC sub-committee. When the Applicant procures the contracts to deliver the Noise requirement for the contractor to manage and operate a complaints procedure for those who accept the invitation to participate and are dissatisfied process. The Applicant will use information from the complaints procedure to monitor the participate of the contractors.

why not and, if there is, signpost

Consultative Committee (LLACC). The s possible is made available to the t it or living around it. The chairman the other bodies on the LLACC. occupiers that will help to put in place ghtforward and process driven. The o make available and secure and addressed with solutions ise Insulation Scheme it will include a sfied with their experience of the

REFERENCES

Ref 1 London Luton Airport (2012), London's Local Airport Planning Application Environmental Statement Chapter 13 Traffic and Transport.

- Ref 2 International Standards Organisation (1996), ISO 9613-2 Acoustics Attenuation of sound during propagation outdoors: Part 2: General method of calculation.
- Ref 3 Her Majesty's Stationery Office (2013), The Aviation Policy Framework.
- Ref 4 Department for Transport (2023), Policy Paper: Overarching Aviation Noise Policy
- Ref 5 Department for Transport (2018). Airports National Policy Statement: new runway capacity and infrastructure at airports in the South East of England.
- Ref 6 Civil Aviation Authority (2019, CAP1766 Emerging Aircraft Technologies and their potential noise impacts
- Ref 7 Department for Transport (2018), Aviation 2050 the future of UK aviation.

Ref 8 Aviation Strategy: Noise Forecast and Analyses

Ref 9 ICAO (2014), Report by the Second CAEP Noise Technology Independent Expert Panel, ICAO Doc. 10017, ISBN 978-92-9249-401-8, ICAO, 2014.

- Ref 10 World Health Organisation (2018), Environmental Noise Guidelines for the European Region.
- Ref 11 Civil Aviation Authority (2021), CAP1506: Survey of Noise Attitudes 2014: Aircraft Noise and Annoyance, Second Edition
- Ref 12 Her Majesty's Stationery Office (2006), The Environmental Noise (England) Regulations.

Ref 13 Her Majesty's Stationery Office (1975), Noise Insulation Regulations.

- Ref 14 Thames Water (2014), Thames Tideway Environmental Statement Volume 14: Kirtling Street Appendices (application reference WWO10001)
- Ref 15 British Standards Institute (2014), BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites. Part 1: Noise. BSi, London. Ref 16 Heathrow (2019), Preliminary Environmental Information Report, Volume 1, Chapter 17: Noise and vibration
- Ref 17 Department for Transport (2017), Consultation Response on UK Airspace Policy: A framework for balanced decisions on the design and use of airspace.

Applicant's Response to Written Questions -Noise Appendix A - 1.16 Conversion Between Integrated Noise Model and AEDT Model

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1 INTRODUCTION

1.1.1 This document provides a response to the Examining Authority's Written Question NO.1.16 **[PD-010]**:

"Conversion between Integrated Noise Model (INM) and AEDT model

ES Appendix 16.1 [AS-096, section 6.16] explains that INM contour area limits show a relatively good fit with AEDT contour area limits, although there is some difference for 25 departure routes. This is assumed to be acceptable on the basis that 2019 radar data shows good correlation between departure profiles on both runways. Is radar data available for other years to support this assumption?"

1.1.2 The response clarifies how a conversion factor between the Integrated Noise Model (INM) and the Aviation Environmental Design Tool (AEDT) has been determined, how it has been applied and a provides a comparison of 2019 and 2022 departure profiles to show that there is a good correlation between 07 and 25 departure profiles from another year.

2 COMPARISON BETWEEN INM AND AEDT

2.1.1 Section 6.16 and 6.17 of **Appendix 16.1** of the **Environmental Statement [AS-096]** provides a comparison between the 2019 Actuals baseline modelled in INM and AEDT. The differences in contour areas were used to derive a conversion factor between INM and AEDT in order to derive a 2019 Consented baseline. This was necessary because the current consented noise contour area limits are defined in INM, but the assessments in **Chapter 16** of the **Environmental Statement [REP1-003]** are undertaken using AEDT. It is important to note that this conversion factor has been derived using 2019 contours, and applied to 2019 contours, so the conversion is not affected by any differences in radar data in other years. The conversion factor has not been applied for any other purpose within the noise assessment.

3 COMPARISON OF 2019 AND 2022 DEPARTURE PROFILES

- 3.1.1 To provide an indication of the correlation between departures on 07 and 25 runways, analysis of 2022 departure profiles has been undertaken as requested and this is presented in Inset 4-1. This analysis shows that, for all aircraft operating in 2022, the departure profiles are reasonably consistent regardless of whether departing on the 07 or 25 runway¹.
- 3.1.2 A comparison between 2019 and 2022 departure profiles has also been made to determine if 2022 departure profiles are consistent with departure profiles in 2019. Departure profiles for easyJet and Wizz Air Airbus aircraft are provided in Inset 4-2 and departure profiles for Ryanair Boeing aircraft are provided in Inset 4-3.

¹ The 07 and 25 runways are the same physical runway with different names based on the direction in which the runway is being operated

- 3.1.3 Departure profiles in Inset 4-2 show that Airbus aircraft are flown consistently; however, Boeing aircraft were flown differently in 2019 than in 2022. In 2019, Ryanair departures ascended to 4,000 feet before continuing on reduced thrust and reducing the rate of ascent. Departure profile data for 2022 indicates this procedure has changed with Ryanair ascending to 2,000 feet before reducing thrust. This would mean that Ryanair aircraft are quieter when they are ascending from 2,000 feet to 4,000 feet due to the reduced thrust setting. When the 2019 profile aircraft reach 4,000 feet, they are approximately 800 feet higher than the 2022 profile; however, the 2019 and 2022 profiles broadly converge by the time they reach 5,000 feet (see Inset 4-3).
- 3.1.4 As described in Section 2, this change has no bearing on the conversion between INM and AEDT which was derived using 2019 contour areas and has only been applied to 2019 contour areas.
- 3.1.5 It is not unexpected that aircraft profiles may change over time. Such changes do not affect the conclusions of the noise assessment in **Chapter 16 of the Environmental Statement [REP1-003]** as they would apply to both the Do-Minimum and the Do-Something scenario.
- 3.1.6 Changes to aircraft profiles would be taken into account in the annual update of the noise model validation secured in the **Aircraft Noise Monitoring Plan** [REP3-023].

4 SUMMARY

- 4.1.1 Radar data has been analysed to provide altitude departure profiles for 2019 and 2022. The analysis shows that there is good correlation between departure operations on runway 07 and runway 25.
- 4.1.2 Analysed altitude departure profiles for 2019 and 2022 show consistency across the years, with the exception of Ryanair Boeing aircraft, which show differences in departure profiles above 2,000ft.
- 4.1.3 Any differences in departure profiles across the years do not affect the conversion between INM and AEDT which was derived using 2019 contour areas and has only been applied to 2019 contour areas.
- 4.1.4 Changes to aircraft profiles would be taken into account in the annual update of the noise model validation secured in the **Aircraft Noise Monitoring Plan** [REP3-023].

Inset 4-1: 2022 Departure Profiles











GLOSSARY AND ABBREVIATIONS

Term	Definition
AEDT	Aviation Environmental Design Tool
INM	Integrated Noise Model

Appendix B - Wizz Air Press Release

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WIZZ AIR TO SWITCH ALL LUTON-BASED AIRCRAFT TO AIRBUS A321NEO BY 2025

Jun 13, 2023, 10:00

Wizz Air, Europe's fastest-growing and most environmentally sustainable airline globally*, will make its entire aircraft fleet at London Luton Airport (LLA) Airbus A321neo by 2025.

Wizz Air has 11 aircraft stationed at its base in London Luton Airport with an average age of 3 years. The share of the new 'neo' technology in the airline's fleet at LLA has already surpassed 50% and will reach 100% by 2025.



The Airbus A321neo has 239 seats in a single-class configuration. The aircraft incorporates the latest technologies in aviation. The new technology offers a nearly 50% reduction in noise footprint, a 20% reduction in fuel consumption and 50% reduction in nitrogen oxide emissions compared to the previous generation aircraft**. The Airbus A321neo can currently fly with up to 50% sustainable aviation fuel (SAF) blend***.

of its fleet renewal programme, which ensures Wizz Air has the latest technology, the older aircraft decommissioned from LLA will re-join Wizz Air's global fleet until 2027, after which it be replaced by new Airbus A321neo aircraft. In addition to its ambitious fleet renewal programme, Wizz Air is constantly working on fuel efficiency initiatives and improving the related data analytics.

Wizz Air has also established its sustainable aviation fuel (SAF) strategy, which includes securing offtake agreements with suppliers for the future, and has already partnered with Neste, OMV and Cepsa. In April 2023, Wizz Air announced its first equity investment in a biofuel company, Firefly Green Fuels, to further support SAF development in the UK. In May 2023, the airline, as part of Indigo Partners, invested in the US-based SAF start-up Clean Joule.

To plan for the longer-term, the airline works with Airbus to explore the potential for hydrogen-powered aircraft. These partnerships reinforce Wizz Air's commitment to driving emissions intensity down by the end of the decade.

Yvonne Moynihan, Corporate and ESG Officer at Wizz Air: "London is an important market for Wizz Air and remains in our focus for continuous investment. We are already leading in sustainability, operating the youngest fleet***** in Europe in the most efficient way. We are focused on technology and innovation and feel confident that fleet renewal is a key solution available here and now to reduce emissions from aviation. Replacing older aircraft at our London Luton Airport base with the newest and more fuel-efficient Airbus A321neo is part of our long-term fleet renewal strategy to reduce carbon intensity by 25% by 2030. We are delighted to work together with London Luton Airport on finding new solutions that help us to reach our targets."

LLA is committed to sustainable aviation and has set an ambition to achieve net zero by 2040 for its airport emissions. Its commitments include generating 25% of electricity from on-site renewable sources by the end of 2026, using 100% low carbon vehicles by 2030 and transitioning to low carbon heat from 2030. In addition, LLA is continuing to work closely with its partners to support and enable the reduction of overall carbon emissions across the airport.

Jonathan Rayner, Chief Commercial Officer at London Luton Airport, added: "We are delighted to have secured this agreement with Wizz Air that adds to the growing number of quieter and more fuel-efficient aircraft that are now based at London Luton Airport. Alongside our own commitment to sustainable aviation, and our ambition to achieve Net Zero by 2040 for our airport emissions, Wizz Air's investment in these next generation aircraft is an example of the way in which we are working with airlines to enable the reduction of overall carbon emissions across our airport. Preparations are well under way for the busy summer ahead and our teams are focused, as ever, on delivering a simple and friendly passenger experience."

*According to CAPA - Centre for Aviation Awards for Excellence 2022

**Based on the comparison between Airbus A320neo and Airbus A320ceo aircraft families.

***SAF must be blended with conventional jet fuel to meet regulatory requirements for use within the aircraft.

****Based on the latest publicly disclosed emission information applicable to a 12-month period (Ryanair, EasyJet). Due to differences in reporting period, the figures and

*****Based on the latest publicly disclosed fleet age information applicable to a 12-month period (Ryanair, EasyJet, Iberia, Norwegian, SAS, Air France – KLM, Lufthansa, Finnair). Due to differences in reporting period, the figures and timeframe are not fully aligned.

BACK

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Appendix C - easyJet Announcement

Aerospace & Defense

UK's easyJet eyes ambitious growth with Airbus fleet deal

By Sarah Young October 12, 2023 10:29 AM GMT+1 Updated 18 days ago







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An easyJet Airbus A320 neo aircraft is parked on the tarmac of Adolfo Suarez Madrid Barajas Airport, in Madrid, Spain, June 22 2022. REUTERS/Isabel Infantes/File photo Acquire Licensing Rights

Summary Companies

To buy up to 257 new aircraft Sees FY profit at 440-460 mln stg Targets 1 bln stg profit in medium term Shares fall 3%

LONDON, Oct 12 (Reuters) - British airline easyJet (EZJ.L) said it would buy up to 257 Airbus jets as it plots its growth beyond 2028 while restoring its dividend and aiming to more than double profits.

Signalling its recovery from the pandemic was now in full flow, easyJet said the time was right to lay out a long-term growth plan based on bigger nd more fuel-efficient planes.

EasyJet chief executive Johan Lundgren said the proposed deal with Airbus (<u>AIR.PA</u>), subject to shareholder approval, would add 157 aircraft plus the option for 100 more A321neo jets. The airline currently operates about 330 aircraft and will be retiring some older planes.

EasyJet's ambitions come despite heightened geopolitical instability following attacks by Palestinian militant group Hamas in Israel, which has lead to <u>flight cancellations</u>, and higher oil prices, plus worries over consumer sentiment in Europe.

Fleet expansion will enable the company to sell more seats on routes from congested European airports like London Gatwick and Amsterdam, where there are few slots available to add more flights.

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Lundgren said by 2034, easyJet's average number of seats per flight would rise to the low 200s from 179.

"The group's very much thinking future-first with a huge new order of aircraft on the table," Hargreaves Lansdown analyst Sophie Lund-Yates said, adding that more information was needed on how the planes would be financed.

Shares in easyJet, which competes with Europe's biggest airline Ryanair (<u>RYA.I)</u>, British Airways (<u>ICAG.L</u>) and others, fell 3.8% in morning deals. They have lost 14% of their value over the last three months as the oil price has risen.

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EasyJet forecast annual profit of 440 million to 460 million pounds (\$542-\$567 million) for the 12 months to the end of September, and said it was targeting a pretax profit of more than 1 billion pounds in the medium term.

The airline made a loss of 178 million pounds last year, when pandemic restrictions were still in place for some of the time.

During COVID-19, it had suspended its dividend, but said this would restart with its full-year results in November.

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Bigger planes, reduced winter losses and the growth of its holidays business would help the company meet its medium term profit goal, Lundgren said, shrugging off worries that the outlook had dimmed.

"We continue to see that the demand is strong going forward," he told reporters on Thursday.

EasyJet, which only flies Airbus planes, said the terms of the deal with Airbus were attractive, without giving details, and it gave the airline certainty at a time when manufacturer order books are filling up.

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It already has a separate order for 163 planes due up to 2028.

The airline's founder Stelios Haji-Ioannou, who owns a 15% stake, has in the past questioned the need to buy expensive new aircraft.

(\$1 = 0.8111 pounds)

Reporting by Sarah Young, Editing by Paul Sandle and Elaine Hardcastle

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Sarah Young Thomson Reuters

Sarah reports on UK breaking news, with a focus on British companies. She has been a part of the UK bureau for 12 years covering everything from airlines to energy to the royals, politics and sport. She is a keen open water swimmer.

Appendix D - BCLF Note



Enterprise House, Wrest Park, Silsoe, Bedfordshire MK45 4HS

Outline of BLCF partnership approach to Community First.

Date 17th Oct 2023

The Draft Compensation Policies, Measures and Community First document outlines how the expansion of the airport will provide a mechanism and opportunity to grow its support for local communities and neighboring areas in need.

As previously shared, Bedfordshire and Luton Community Foundation (BLCF) have worked in partnership with LLAL (Luton Rising) for the last 15 years supporting delivery of their ambitious and needs driven Community Funding Programme. Over the last 4 years we have been contracted to support their CSR work and to ensure a significant amount of community funding is used to support charitable and community works across Luton and neighbouring communities, who are impacted the most by the airport's activity and those communities most in need or at risk. Since 2019 and the launch of the Community Investment Fund (CIF) programme in early 2020, we have managed and awarded £13,433,203 in Luton Rising funding. This has been through managing and accessing 392 applications, resulting in 296 grants being awarded and reaching 964,069 beneficiaries.

Community First aims to build on this success and learning and develop a stronger and more far-reaching programme of funding support. As outlined, the aim is to grow, the airport's passenger numbers to 32mppa and in turn create up to £13m additional funding for communities. This growth will of course take time to build, and this will allow the Community First programme to develop and shape in a sustainable way, adapting and responding to needs and learning as it develops to its target.

Current Luton Rising funding managed by BLCF sees c£3.5m awarded across 4 grant programmes which are Community Investment fund (CIF), Small Grants (SG), Luton Youth Fund (LYF) and Near Neighbours (NN). This amount of funding on average sees c 100 applications per year across these programmes, however BLCF regularly manages a grants programme across 16 funders, worth over £5m with c400 annual applications. Growth to £13m may not be realized until the 2040s but the level of grants managed would grow with the funding so for example the airport achieves £2.5m by 2027 then this could support 50 grants at £25k (50%) and 125 grants at £10k (50%) and consideration for increasing the upper grant limit could also be made. The capacity of BLCF would grow to support the levels of demand, and its expanded geography will see that impact and success seen to date reaches even more of the most in need communities of Bedfordshire and surrounding counties.

As experts in grants management BLCF bring these skills to the current partnership with Luton Rising and if appointed as their independent delivery body, would develop a layered approach to delivering Community First. We would recommend that the funds are structured in a way to support a range of need within the authorised Community First themes, assisting projects and VCSE groups to access the funds ensuring equity and reducing barriers to access that are experienced by many minoritised communities or those led by



Enterprise House, Wrest Park, Silsoe, Bedfordshire MK45 4HS

and supporting groups with protected characteristics according to the Disability Discrimination act 1995. This would be by,

- 1. Creating entry level grant funds (potentially less than £10k a year) to support pilot and testing projects and build smaller VCSE groups' own sustainability, and skills to secure and deliver funded projects.
- 2. Move towards multiyear funding (up to the stated £25k a year max) to ensure groups can deliver longer term impact and evidence of impact for the benefit of targeted communities.
- 3. Create programmes to align with the Luton 2040 vision strategic priorities and that's groups are supported to gather and report data that evidence this impact.

Through this approach we could see even more applications managed but across a range of programmes so that Community First becomes the umbrella for a range of new targeted funds with a clear strategic fit.

Managing a range of new programmes could be resourced through BLCF, if we are successfully appointed, and we would work with Luton Rising to grow and expand as the Community First funds became available to ensure its was managed and delivered successfully and always aligned to current and long term needs of the communities its reaches.



Karen Perkins

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