

An aerial night photograph of Heathrow Airport. The main terminal building is illuminated from within, showing its glass facade and structural details. The tarmac in the foreground is lit by ground lights, with various aircraft, ground support equipment, and service vehicles visible. A prominent white tower with a red light on top stands in the lower center. The sky is a deep twilight blue with some light clouds. The overall scene is a busy airport at night.

NACF NIGHT FLIGHT DEEP DIVE – MAY 2023

Heathrow

Objectives for the session

- Gain a common level of understanding of the existing night restrictions and historic trends.
- To understand more about how Heathrow seek to manage late running operations and report night flights
- To explore and understand different perspectives on the costs and benefits of night flights at Heathrow.
- To identify areas of common interest and agree potential next steps to be taken that can help reduce the impact of night flights.

Background

The government sets night-time operating restrictions at Heathrow, Gatwick and Stansted as these airports are designated for the purposes of noise regulation under the Civil Aviation Act 1982.



Noise Abatement Objective

The Secretary of State, as competent authority for the noise designated airports (Heathrow, Gatwick and Stansted) is required to define a noise abatement objective for airports where a noise problem has been identified.

ICAO Balanced Approach

The Balanced Approach requires that decisions in relation to an airport's operations take into account both health and economic factors.

Next Night Flying Regime

Consultation on this next regime can be expected to launch in late 2023. Ahead of this, the government has now confirmed a decision on its overarching aviation noise policy statement.



National Aviation Policy Statement

This *balance* should take into account the local and national context of both passenger and freight operations and recognise the additional health impacts of night flights.

The impact of aviation noise must be mitigated as much as is practicable and realistic to do so, limiting, and where possible reducing, the total adverse impacts on health and quality of life from aviation noise.

An overall reduction in total adverse effects is desirable, but in the context of sustainable growth an increase in total adverse effects may be offset by an increase in economic and consumer benefits. In circumstances where there is an increase in total adverse effects, “limit” would mean to mitigate and minimise adverse effects, in line with the Noise Policy Statement for England.



The government’s overall policy on aviation noise is to balance the economic and consumer benefits of aviation against their social and health implications in line with the International Civil Aviation Organisation’s Balanced Approach to Aircraft Noise Management.



Current Regime

Current Night Noise Objective

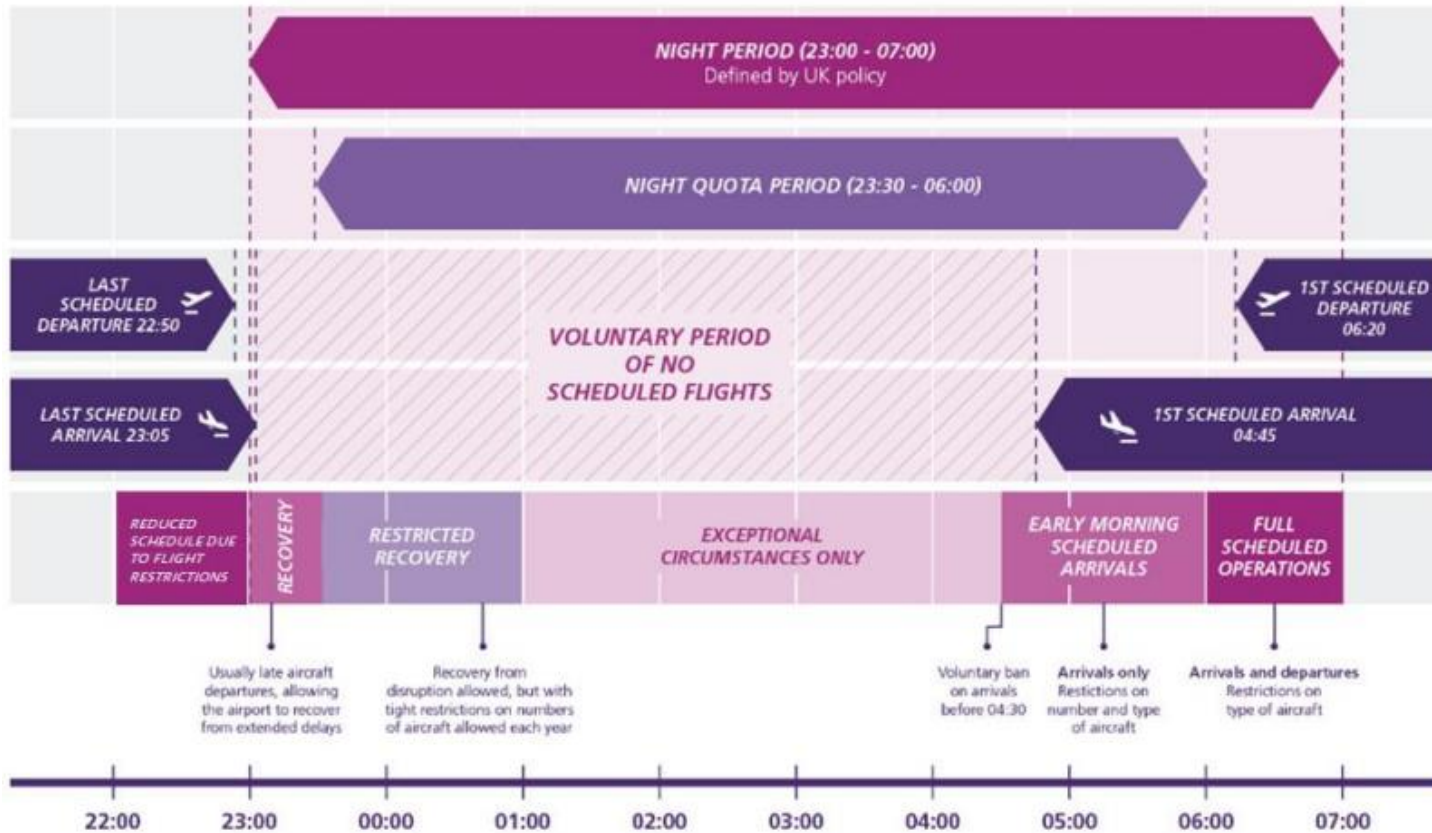
“Limit or reduce the number of people significantly affected by aircraft noise at night, including through encouraging the use of quieter aircraft, while maintaining the existing benefits of night flights”

Measured by

- 1 Number of people in the 48dBA 6.5hr night contour
- 2 Sleep disturbance impacts associated with night flights.
- 3 Average QC



Summary of Current Restrictions and voluntary measures



Current indicator trends

Number of people in the 48dBA 6.5hr night contour

6.5hr contour area (L_{Aeq} 48dB)	(2006) 56.4	33.4	-41%
6.5hr contour population <i>with</i> encroachment (L_{Aeq} 48dB)	(2006) 137,400	114,000	-17%
6.5hr contour population <i>without</i> encroachment (L_{Aeq} 48dB)	(2006) 137,400	89,500	-35%

Sleep Disturbance (EU Position Paper curve)

Highly Sleep Disturbed Population	(2001) 25,441	23,130	-9%
Highly Sleep disturbed Population <i>without</i> encroachment*	(2001) 25,441	18,885	-26%

Average QC

Yearly QC allowance <i>Winter + summer season combined</i>	(1998) 13,200	8,025	-39%
Average QC per movement <i>Winter + summer season combined</i>	(1998) 1.62	0.81	-50%



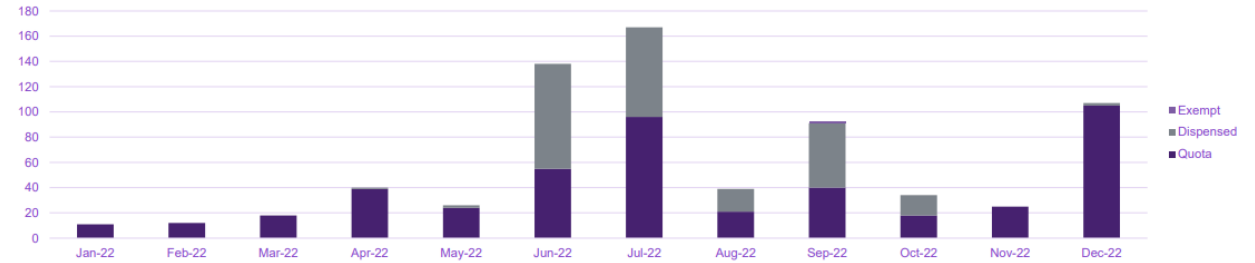
Some Supplementary Long-Term Indicators

International Arrivals

Metric	Earliest Data Available (Year)	2019	% Change	Metric	Earliest Data Available (Year)	2019	% Change	Metric	Earliest Data Available (Year)	2019	% Change
All Movements	(1991) 381,726	478,060	+25%	Movements 04:30 - 06:00	(2001) 4,589	5,217	+14%	8hr contour area (L _{night} 50dB)	(2001) 90.2	72.2	-20%
	(2001) 463,568	478,060	+3%	Movements 06:00 - 07:00	(2001) 15,506	20,345	+31%				
All Passengers	(1991) 40,304,506	80,892,802	+101%	Movements Night Quota Period (23:30 - 06:00)	(2001) 5,644	5,894	+4% *	8hr contour population with encroachment (L _{night} 50dB)	(2001) 251,900	228,500	-9%
	(2001) 60,448,172	80,892,802	+34%	Movements Night Period (23:00 - 07:00)	(2001) 23,631	29,171	+23%	8hr contour population without encroachment (L _{night} 50dB)	(2006) 207,200	188,200	-9%
All Cargo (kg)	(1991) 661,111,276	1,588,171,197	+140%	Passengers Night Quota Period (23:30 - 06:00)	(2001) 1,382,507	1,615,398	+17%	Yearly QC allowance Winter + summer season combined	(1998) 13,200	8,025	-39%
	(2001) 1,180,338,903	1,588,171,197	+ 35%	Passengers Night Period (23:00 - 07:00)	(2001) 4,581,431	6,519,264	+42%				
Movements 23:00 - 23:30	(2001) 2,481	2,932	+18%	Cargo Night Quota Period (23:30 - 06:00)	(2001) 38,273,710	48,678,693	+27%	Average QC per movement Winter + summer season combined	(1998) 1.62	0.81	-50%
				Cargo Night Period (23:00 - 07:00)	(2001) 164,415,501	192,670,684	+17%				
Movements 23:30 - 00:00	(2001) 442	407	-8%	Cargo Half hour 23:00 - 23:30	(2001) 11,657,099	20,866,938	+79%				
				CDA Night Quota Period (23:30 - 06:00)	(2001) 83%	96%	+13%				
Movements 00:00 - 04:30	(2001) 613	270	-56%	CDA Night Period (23:00 - 07:00)	(2001) 73%	93%	+20%				
				CDA 06:00 hour	(2007) 86%	92%	+6%				

Late Runners

Late running departures by quota, dispensed and exempt



Departure Night Movements 2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Quota	11	12	18	39	24	55	96	21	40	18	25	105	464
Dispensed	-	-	-	1	2	83	71	18	51	16	-	2	244
Exempt	-	-	-	-	-	-	-	-	1	-	-	-	1
Total	11	12	18	40	26	138	167	39	92	34	25	107	709

Notes

1. Dispensed flights: Sometimes, for reasons of disruption, emergency or passenger hardship, flights are allowed by DfT to operate outside the constraints of the movement limits.
2. Exempt flights: Exempt aircraft are light propeller-driven aircraft with a maximum certificated take-off weight not exceeding 8,618kg, and which are being utilised to undertake essential airport safety checks. Other exempt flights include State flights, head of Military, select VIP's.



Historic Night Operations

Movements, Passengers & Cargo – Operational Night

Year	Movements													Number of Dispensations	Nights without Night Flights				CDA Compliance			Passengers		Cargo		
	Night Period (2300-0700)	Night Quota Period (2330-0600)	2300-2330	2330-0000	0000-0100	0100-0200	0200-0300	0300-0400	0400-0430	0430-0500	0500-0600	0600-0700	Night Quota Period (2330-0600)		2300-2330	2330-0000	0000-0100	0100-0430	Night Quota Period (2330-0600)	Night Period (2300-0700)	0600-0700	Night Period (2300-0700)	Night Quota Period (2330-0600)	Night Period (2300-0700)	Night Quota Period (2330-0600)	2300-2330
Count	Count	Change vs. 2019*	Count										Count	Count				% Compliance			Count		kg			
2001	23,631	5,644	+4%	2,481	442	481	79	25	11	17	914	3,675	15,506		3	148	65	214	83	73		4,581,431	1,382,507	164,415,501	38,273,710	11,657,099
2002	25,415	6,154	-4%	2,803	657	576	109	34	8	14	1,109	3,647	16,458									5,185,043	1,523,701	185,455,322	46,390,627	15,913,740
2003	24,607	5,700	+3%	2,376	470	524	97	31	35	33	1,297	3,213	16,531									5,070,025	1,450,852	178,893,893	43,462,987	13,105,189
2004	25,636	5,686	+4%	2,879	508	472	111	26	8	18	1,311	3,232	17,071									5,411,234	1,475,608	186,305,894	44,260,280	15,114,599
2005	26,358	5,859	+1%	3,067	546	373	84	20	9	27	1,242	3,558	17,432									5,612,993	1,572,847	192,581,514	47,769,778	16,539,933
2006	26,859	6,180	-5%	3,047	659	478	114	36	6	20	1,410	3,457	17,632									5,564,361	1,597,658	184,737,340	44,378,006	14,766,798
2007	27,791	5,961	-1%	3,901	767	375	83	24	7	22	1,358	3,325	17,929					92	88	86		5,716,462	1,525,223	193,336,491	43,640,335	21,595,568
2008	27,495	5,814	+1%	3,065	598	318	67	26	7	11	1,350	3,437	18,616									5,536,882	1,475,322	185,524,174	43,837,766	16,417,365
2009	26,779	5,816	+1%	1,905	498	289	83	38	6	7	1,455	3,440	19,058	206				94	89	88		5,463,987	1,506,955	174,137,317	43,300,386	12,624,753
2010	26,757	6,253	-6%	2,850	654	506	182	53	19	9	1,373	3,457	17,654	666				94	91	90		5,482,763	1,552,053	208,615,358	48,440,080	18,442,697
2011	27,523	5,733	+3%	2,457	374	222	56	10	6	6	1,552	3,507	19,333	198	24	156	195	256	94	92	91	5,579,536	1,486,053	198,334,337	45,752,084	17,329,684
2012	27,363	5,676	+4%	2,671	504	299	49	23	10	10	1,454	3,327	19,016	292	12	121	191	276	95	92	91	5,553,138	1,461,309	192,376,712	47,687,849	17,632,441
2013	28,196	5,848	+1%	3,628	510	270	78	29	9	8	1,470	3,474	18,720	314	6	128	198	285	95	93	93	5,880,513	1,521,140	181,929,934	47,323,995	22,464,356
2014	27,741	5,806	+2%	3,166	509	250	42	4	4	2	1,544	3,451	18,769	482	7	154	210	305	96	93	92	5,734,070	1,540,793	188,914,178	51,671,567	20,605,370
2015	27,551	5,770	+2%	3,037	411	203	38	3	1	3	1,531	3,580	18,744	299	3	173	230	318	96	93	92	5,785,045	1,512,632	191,935,795	52,741,715	20,044,727
2016	28,386	6,039	-2%	3,088	492	318	52	6	0	5	1,570	3,596	19,259	477	5	158	209	326	96	92	92	5,936,595	1,577,810	190,401,942	54,198,962	21,345,189
2017	28,265	5,924	-1%	2,632	361	199	25	2	0	2	1,617	3,718	19,709	368	8	182	228	336	97	93	91	6,075,625	1,626,162	204,543,302	57,813,066	20,648,236
2018	29,470	6,224	-5%	2,897	513	304	48	1	0	1	1,836	3,521	20,349	700	3	169	231	342	96	93	92	6,500,641	1,683,107	210,345,403	53,593,366	22,716,998
2019	29,171	5,894	0%	2,932	407	231	27	5	1	6	1,779	3,438	20,345	419	15	184	230	347	96	93	92	6,519,264	1,615,398	192,670,684	48,678,693	20,866,938

Source: ANOMS (noise track keeping system), Heathrow internal data

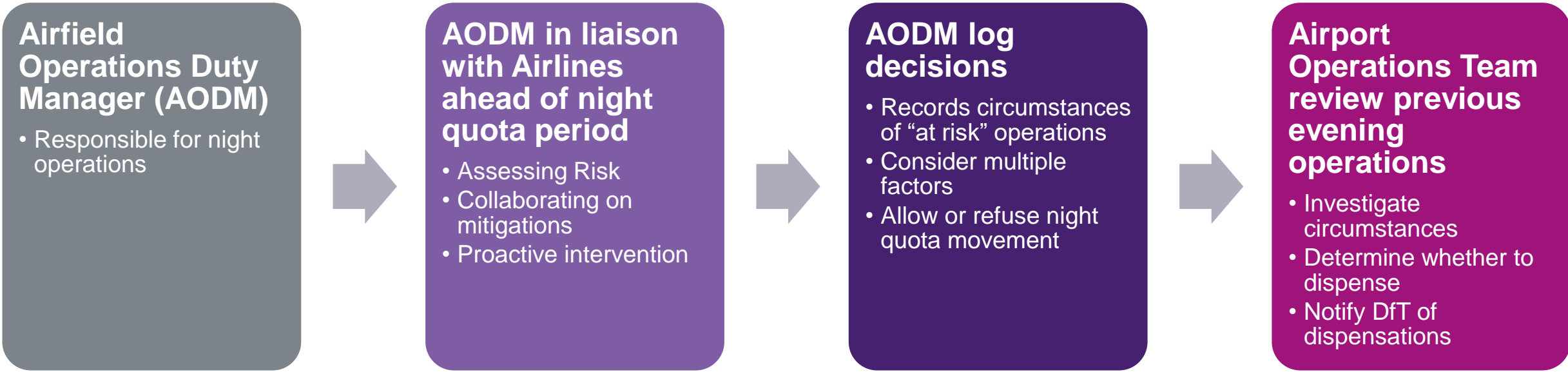
Table 15: Movements, Passengers & Cargo – Operational Night 2001-2019

* + indicates an increase towards 2019, – indicates a decrease towards 2019

A silhouette of a person walking from left to right in an airport terminal. The person is wearing a dark jacket, trousers, and shoes, and is pulling a large black rolling suitcase. The background is a large window with a view of a city skyline at dusk or dawn, with warm, golden light. The floor is made of large, light-colored tiles. The text "Dispensations & Unscheduled Operations" is overlaid in white, bold, sans-serif font in the center of the image.

Dispensations & Unscheduled Operations

High level dispensation decision process



Flight Number	Arrival/Departure	Details	Regulation Code(s)	Decision	Scheduled Date & Time	Agreed Date & Time (UTC)	Actual Date & Time (UTC)	AODM Interventions	Result
QF002	Departure	Technical issue with their altimeters		Granted	01/01/2023	01/01/2023	01/01/2023		Before Night Quota Period
BA157	Departure	Water leak at the rear of a/c. Issue w		Granted	01/01/2023	01/01/2023	01/01/2023		During Night Quota Period
BA123	Departure	Damaged a bin on loading. Had to c		Granted	02/01/2023	02/01/2023	02/01/2023		
BE1229	Departure	Technical issues to 4/5 aircraft in the		Granted	05/01/2023	05/01/2023	05/01/2023	Approved ATC the use	During Night Quota Period
VS450	Arrival	Medical Pan declared at 03:57 from /		Granted	06/01/2023	06/01/2023	06/01/2023	82 year old female take	During Night Quota Period
BA83	Departure	X1 Passengers has thrown up in the J		At Risk	07/01/2023	07/01/2023	07/01/2023	Escalated the cleaning r	
TP1366	Arrival	Inbound service into Lisbon had dela		At Risk	07/01/2023	07/01/2023	07/01/2023		Before Night Quota Period
BA663	Arrival	Aircraft had picked up rotational del		Granted	07/01/2023	07/01/2023	07/01/2023		During Night Quota Period
AI130	Departure	Technical issue with a/c at outstation		Granted	08/01/2023	08/01/2023	08/01/2023		Before Night Quota Period
BA491	Arrival	Outbound BA490 diverted to AGP du		Granted	08/01/2023	08/01/2023	09/01/2023		During Night Quota Period
AC051	Arrival	ACS1 declared medical pan for an inc		Granted	10/01/2023	10/01/2023	10/01/2023		During Night Quota Period
J28	Departure	Unknown, aircraft left late from GYD		At Risk	10/01/2023	10/01/2023	10/01/2023	Will arrive the aircraft	Before Night Quota Period
CX254	Departure	CX advised they had no cutlery onbo:		Refused	10/01/2023	10/01/2023	10/01/2023	Advised CX they would	Before Night Quota Period
BA59	Departure	BA have removed a disruptive passer		At Risk	10/01/2023	10/01/2023	10/01/2023		Before Night Quota Period
VS449	Departure	VS have a sick crew member in JNB a		At Risk	10/01/2023	10/01/2023	10/01/2023		Before Night Quota Period
AI130	Departure	Faulty toilets		At Risk	16/01/2023		17/01/2023		Before Night Quota Period
BA199	Departure	Original AC went tech requiring an ai		Granted	17/01/2023	18/01/2023	18/01/2023		During Night Quota Period
BA163	Departure	Late tow back to stand and delay get		Granted	17/01/2023	18/01/2023	18/01/2023		Before Night Quota Period

Proactive collaboration between the Airport Operations Duty Manager & Airline staff reduces night flights

During 2023 to date (05 May) interventions by the AODM and early dialogue with Airline colleagues has resulted in additional nights without operations after 2330.

The table opposite provides some examples of the type issues that can put a flight at risk of operating in the night quota period (2330-0600).

Scheduled Date	NJMs on this Date?	Flight Number	Arrival/Departure	Details	Decision	AODM Interventions	Result	Comments
20/01/2023	No	QR3293	Departure	Aircraft underwent repair	Refused		Cancelled	
03/02/2023	No	BA824	Departure	Flight crew sick - needed replacement - no standby crew on site, agreement of 2hrs call out, so wont have crew to airport before 23:20.	Refused	Refused NJM, leading to crew attending airport sooner than 2hrs agreement with company	Before Night Quota Period	
03/02/2023	No	BA489	Arrival	sick cre member - need to obtain a 5th fit attendant (one on board apparently) and although eta expected 23:20z, would I grant extension and permit NJM if delayed further.	Refused		Before Night Quota Period	
12/02/2023	No	BA427	Arrival	Tail changed conducted at AMS. Crew required further checks which meant flight would arrive by 2345z. Declined on basis a.c was on ground since 19z.	Refused		Before Night Quota Period	
18/02/2023	No	CX254	Departure	Late inbound due to rotational delay and enroute delays. Arrived 40min late. NJM requested but refused as this is a regular occurrence which HAL cannot support with.	Refused		Before Night Quota Period	
18/02/2023	No	VS449	Departure	Required engine repairs and a tail changewas required. They estimated 70mins to conduct a tail change, however NJM was declined based on the uncertainty of the time frame and also VS has no NJMs left to use.	Refused		Before Night Quota Period	VS elected to repair the ac and had departed prior to curfew period.
18/02/2023	No	TK1984	Departure	Late inbound due to rotational delays. Arrived 30mins late. Agreed to cancel cargo and focus on bags and pax.	Refused		Before Night Quota Period	
26/02/2023	No	BA083	Departure	Hydraulic leak near flaps and was able to repair. Requested NJM, but refused based on no certain times provided and current status of turnaround.	Refused		Before Night Quota Period	
27/02/2023	No	FI455	Departure	Diverted back to KEF due tech and a tail change conducted. Requested NJM but refused as they had planned to depart LHR in the curfew.	Refused			T2 stand planned reviewed and can accommodate an additional aircraft if night stopped.
03/03/2023	No	EI725	Departure	Tech issue at Shannon	Refused	Asked ATC to use N7 an intersection if required.	Before Night Quota Period	Advised to minimise turnaround. Did actually use N7 for dep.
18/03/2023	No	BA59	Departure	Catring issue. Advised no wine or champagne has been loaded. Advised it will take 60 min to cater	Refused	Not granted on catering issues	Before Night Quota Period	
04/04/2023	No	EI388	Arrival	Rotational delays ended with a tech (intercom) problem at SNN.	Refused		Before Night Quota Period	
03/05/2023	No	BA465	Arrival	Reports on intoxicated crew member on LHR-MAD leg, RTS and was removed then further delayed while sourcing standby crew. A/C would have 50-60mins on ground in MAD, enough time to spin it, therefore NJM denied.	Refused		Before Night Quota Period	

Example of data on dispensations

Disp No	Actual/Official Date and Time	Scheduled Date and Time	Operation Type (A/D)	Airline	Flight Number	Destination / Origin	Aircraft Type	Quota Value	Category	Subcategory
1	13/11/2022 00:26	12/11/2022 16:40	Arrival	BAW	BA409	VLC	320	0.25	Delays likely to lead to serious airfield or terminal congestion	Hardship to passengers
2	14/11/2022 05:22	14/11/2022 06:15	Arrival	BAW	BA092	YYZ	351	0.5	Widespread and prolonged ATC disruption	Low visibility
3	14/11/2022 05:41	14/11/2022 06:25	Arrival	BAW	BA212	BOS	77W	1	Widespread and prolonged ATC disruption	Low visibility
4	14/11/2022 05:44	14/11/2022 06:45	Arrival	ETD	EY011	AUH	781	0.25	Widespread and prolonged ATC disruption	Low visibility
5	14/11/2022 05:50	14/11/2022 06:20	Arrival	VIR	VS104	ATL	351	0.5	Widespread and prolonged ATC disruption	Low visibility
6	14/11/2022 05:53	14/11/2022 06:30	Arrival	BAW	BA206	MIA	388	0.5	Widespread and prolonged ATC disruption	Low visibility
7	14/11/2022 05:57	14/11/2022 06:25	Arrival	BAW	BA112	JFK	772	0.5	Widespread and prolonged ATC disruption	Low visibility
8	14/11/2022 05:59	14/11/2022 06:15	Arrival	BAW	BA250	SCL	789	0.25	Widespread and prolonged ATC disruption	Low visibility
9	21/11/2022 00:39	21/11/2022 00:50	Arrival	BAW	BA1318R	LHR	320	0.125	Emergency (risk to life or health)	Other
10	01/12/2022 05:45	01/12/2022 06:20	Arrival	QTR	QR009	DOH	77W	1	Widespread and prolonged ATC disruption	Low visibility
11	01/12/2022 05:47	01/12/2022 06:15	Arrival	BAW	BA106	DXB	789	0.5	Widespread and prolonged ATC disruption	Low visibility
12	01/12/2022 05:53	01/12/2022 06:20	Arrival	VIR	VS104	ATL	351	0.5	Widespread and prolonged ATC disruption	Low visibility
13	01/12/2022 05:56	01/12/2022 06:20	Arrival	CPA	CX255	HKG	77W	1	Widespread and prolonged ATC disruption	Low visibility
14	11/12/2022 05:29	11/12/2022 06:25	Arrival	SVA	SV107	RUH	77W	1	Widespread and prolonged ATC disruption	Low visibility
15	11/12/2022 05:52	11/12/2022 06:20	Arrival	UAL	UA110	EWR	76W	0.5	Widespread and prolonged ATC disruption	Low visibility
16	11/12/2022 05:55	11/12/2022 06:15	Arrival	BAW	BA106	DXB	789	0.5	Widespread and prolonged ATC disruption	Low visibility
17	14/12/2022 23:51	14/12/2022 17:05	Arrival	BAW	BA953	MUC	320	0.25	Widespread and prolonged ATC disruption	Snow / ice
18	22/12/2022 00:29	21/12/2022 20:40	Departure	ICE	FI455	KEF	75T	1	Widespread and prolonged ATC disruption	Snow / ice
19	28/12/2022 23:32	28/12/2022 18:30	Departure	TAP	TP1357	LIS	319	0.5	Widespread and prolonged ATC disruption	Low visibility



Future Thinking



Why is a noise abatement objective needed?

The Balanced Approach requires that measures to address a noise problem at an airport should be no more restrictive than are needed to meet the noise objectives. Operating restrictions should only be introduced at airports if there are no other ways of achieving the desired effect.

1

Setting the level of ambition

Having identified a noise problem at an airport, the purpose of a noise abatement objective is to act as the enabling statement that provides the focus for any necessary noise measures. A noise abatement objective can be used to set the level of ambition for a noise management regime.

2

Making it SMART

The intention of the government is to have a night-noise noise abatement objective which is aligned with our national aviation noise policy statement, which includes measurable and achievable outcomes against which progress can be assessed and which can achieve a balance between the needs of different stakeholder groups.



ion: Public

DfT's new night noise objective for consultation

“Whilst supporting sustainable growth and recognising the importance to the UK of maintaining freight connectivity, to limit and where possible reduce, the adverse effects of aviation noise at night on health and quality of life.”

Measured by.....?

- 1
- 2

} TBC Winter 2023?

A silhouette of a person walking from left to right in a large, brightly lit airport terminal. The person is wearing a dark jacket, trousers, and shoes, and is carrying a backpack and pulling a rolling suitcase. The background consists of large glass windows that reflect the interior lights and show a hazy cityscape outside. The floor is made of large, light-colored tiles. The overall atmosphere is warm and golden, suggesting late afternoon or early morning light.

Assessing Impacts

Understanding the costs and benefits

Benefits

- Airlines UK (2021) report claims £8.6bn for all night flights in UK
- Estimated £4.3bn associated with Heathrow
- Cambridge economics (2016) estimated value at £986m per annum.
- How do we assess the value of freight?
- How do we quantify benefits of employment

Costs

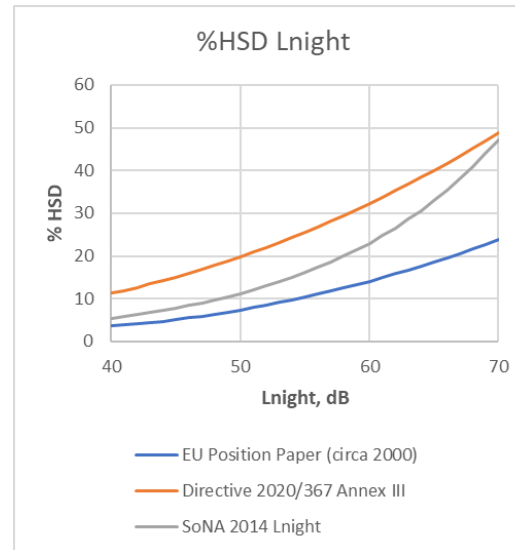
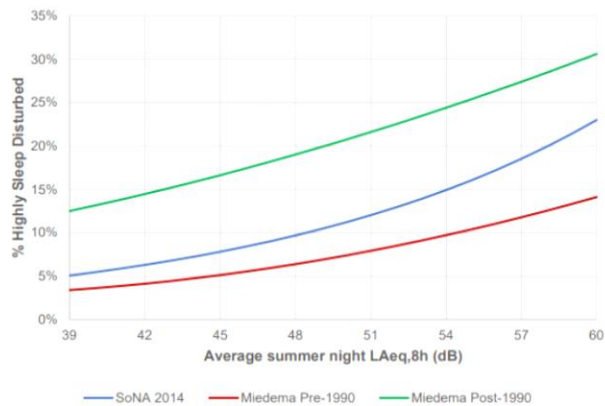
- Suggestion of between £300m (DefRA, 2014) and £800m (WHO) per annum for annoyance & sleep disturbance costs –
- Additional costs not included e.g. stroke/dementia etc would potential make this higher
- How do we assess potential impacts on productivity?

How can we improve our assessment of the costs and benefits of night flights?

Understanding the health impacts

- Which curve to use?
- What next?
- Are there priority areas?

Figure 8: Logistic regression function for percent highly sleep disturbed for SoNA 2014 night as a function of average annual L_{night} and compared with Miedema pre-1990 and post-1990 studies⁷



Different curves and different assumptions – Sleep Disturbance

With Encroachment vs 2019 (Annual Population Update (SONA curve))

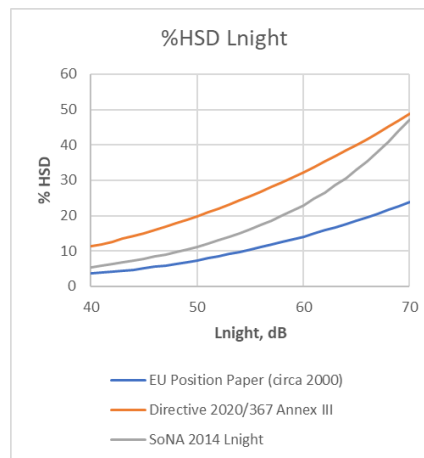
Lnight	Mid band	2015	2016	2017	2018	2019
48	49.50					
51	52.50					
54	55.50					
57	58.50					
60	61.50					
63	64.50					
66	67.50					
Total						

With Encroachment vs 2006 (Annual Population Update (Annex III curve))

Lnight	Mid band	2006	2015	2016	2017	2018	2019
>50	52.50	46,773					
>55	57.50	17,867					
>60	62.50	5,876					
>65	70.00	829					
>70	72.50	53					
Total		71,398					

Without Encroachment vs 2006 (2006 Population (Annex III curve))

Lnight	Mid band	2006	2015	2016	2017	2018	2019
>50	52.50	46,773					
>55	57.50	17,867					
>60	62.50	5,876					
>65	70.00	829					
>70	72.50	53					
Total		71,398					



- Positive Change vs Reference Year
- Negative change vs reference year



Same curve and different assumptions – Annoyance

With Encroachment vs 2019 (Annual Population Update, Actual E-W split (Annex III curve))

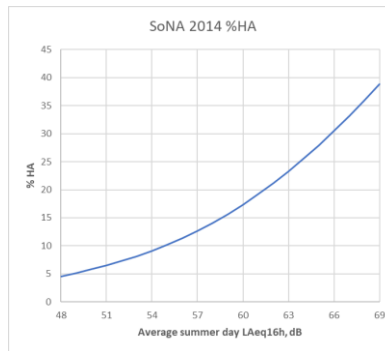
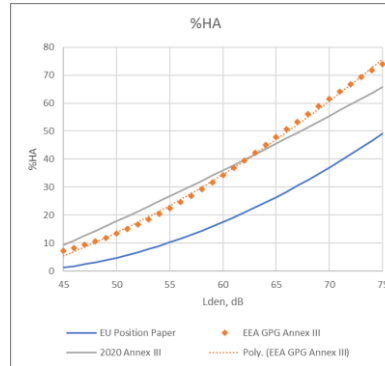
Lden	Mid band	2006	2015	2016	2017	2018	2019
>55	57.50	Green	Green	Green	Green	Red	Green
>60	62.50	Green	Green	Green	Green	Red	Green
>65	67.50	Green	Green	Red	Green	Red	Green
>70	72.50	Green	Green	Green	Green	Red	Green
Total		Green	Green	Green	Green	Red	Green

Without Encroachment vs 2019 (2006 Population, Actual E-W split (Annex III curve))

Lden	Mid band	2006	2015	2016	2017	2018	2019
>55	57.50	Green	Green	Green	Green	Red	Green
>60	62.50	Green	Green	Green	Green	Red	Green
>65	67.50	Green	Green	Red	Green	Red	Green
>70	72.50	Green	Green	Green	Green	Red	Green
Total		Green	Green	Green	Green	Red	Green

Without Encroachment vs 2019 (2006 Population, E-W split & N-S runway split (Annex III curve))

Lden	Mid band	2006	2016	2017	2018	2019
>55	57.50	Green	Green	Green	Green	Green
>60	62.50	Green	Green	Green	Green	Green
>65	67.50	Green	Red	Green	Green	Green
>70	72.50	Green	Green	Green	Green	Green
Total		Green	Green	Green	Green	Green



Green Positive Change vs Reference Year
Red Negative change vs reference year



Discussion Areas

How can noise/impacts be reduced?

- Are there opportunities to manage the 0600-0700 period differently to reduce noise impacts?
- What can Heathrow do to reduce impacts?
- Can some flights be moved out of the night period?
- What is the process for implementing an operating restriction?

How to reduce late runners?

- Can fines be issued for persistent late runners?
- Can noisiest aircraft (Departures) be scheduled earlier?
- What mechanisms are required to ensure a reduction in the number of late running operations?

How to address concerns about the new night objective?

- Providing clarity around the key terms and intent behind the statement
- Setting measurable criteria
- Defining the expected outcomes or measures of success
- Restrictions should not be a first resort

Dispensations

- a need for more clarity around the dispensation process as a large proportion of late operations in 2022 were dispensed.
- greater transparency in the reporting process.
- concerns around potential relaxation of dispensation guidelines.

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