

# Reminder: Valuing Negative Annoyance Impacts at Heathrow

= Pop Exposed x %HA x Disability Weight x Health Value

- Disability Weight Defra 2014 assumed 0.02 (as WHO) & Health Value £60kpa
- Compare Defra 2014 (based on Miedema) to WHO as a reasonable sensitivity

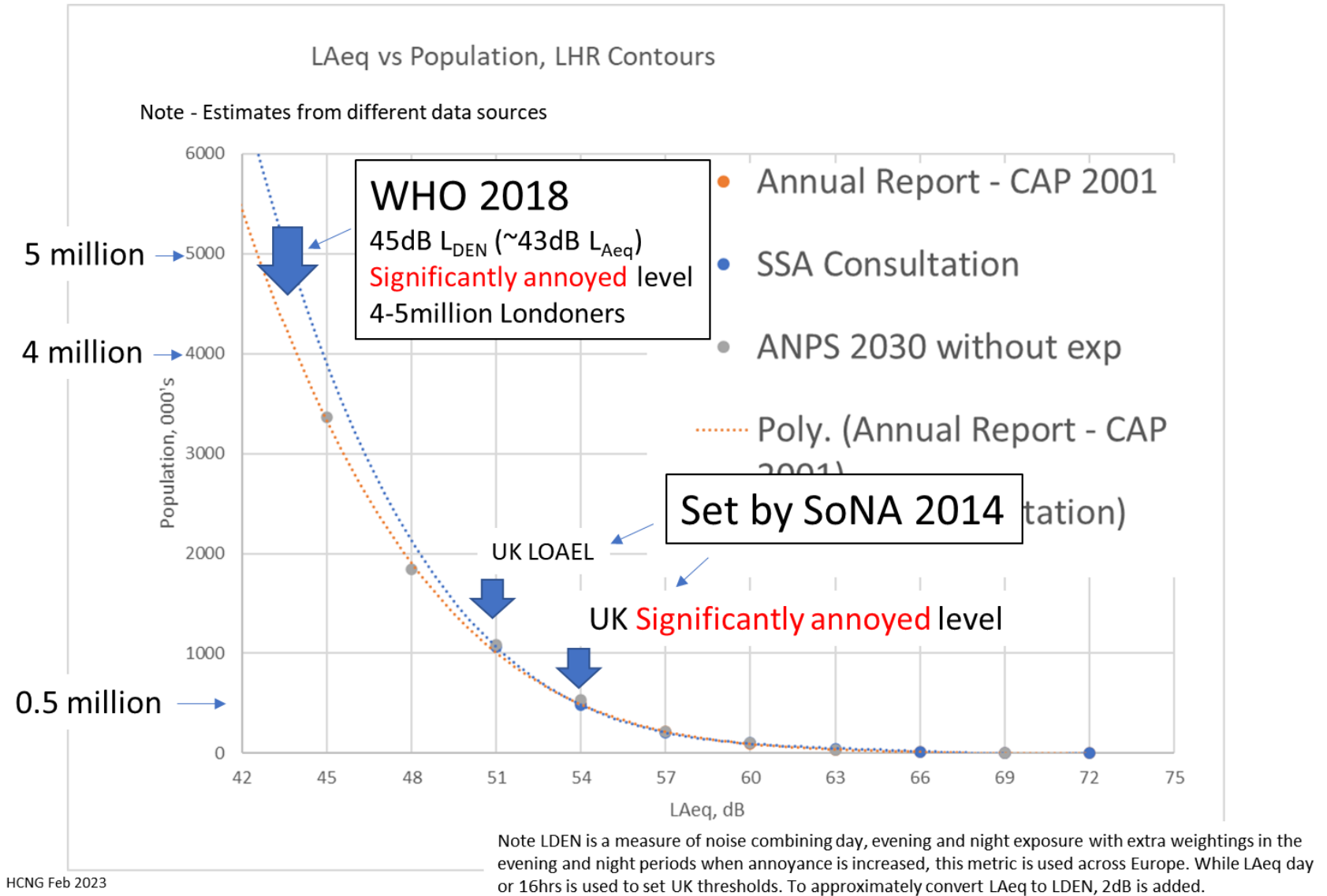
Significant impacts to 45dB LAeq

Band, dB LAeq	Pop in band, k	%HA - Defra 2014	Pop HA	Value, £m	%HA - WHO	Pop HA	Value, £m
45-48	1525	4	54075	65	15	233015	280
48-51	769	6	48131	58	20	157513	189
51-54	570	10	54944	66	26	147264	177
54-57	292	14	39831	48	31	91276	110
57-60	109	18	19923	24	37	40148	48
60-63	64	24	15091	18	43	27283	33
63-66	28	29	8133	10	48	13391	16
66-69	10	36	3519	4	54	5339	6
69-72	2	43	1060	1	61	1497	2
Total Noise Impact from Annoyance, £m pa		294			860		
Cost per passenger, £		4			11		

~3x

Noise impacts from sleep disturbance, and other health impacts like hypertension still need to be added in

# Reminder; Heathrow Noise impact is highly sensitive



# Valuing Negative Sleep Disturbance Impacts at Heathrow

= Pop Exposed x %Highly Sleep Disturbed x Disability Weight x Health Value

- Disability Weight Defra 2014 assumed 0.07 (as WHO) & Health Value £60kpa
- Compare Defra 2014 (based on Miedema) to WHO as a reasonable sensitivity

Significant impacts in 40-45dB Lnight

Band, dB Lnight	Pop in band, k	%HSD - Defra 2014	Pop HSD	Value, £m	%HSD - WHO	Pop HSD	Value, £m	
39-42	377	4	14103	59	12	43886	184	
42-45	288	5	13269	56	14	39863	167	
45-48	211	6	12119	51	16	34620	145	
48-51	146	7	10453	44	19	28270	119	
51-54	94	9	8262	35	23	21184	89	
54-57	53	11	5736	24	26	13997	59	
57-60	25	13	3258	14	30	7600	32	
60-63	9	15	1405	6	35	3150	13	
63-66	3	18	576	2	39	1246	5	
66-69	2	21	402	2	44	841	4	
Total Noise Impact from Sleep Disturbance, £m pa				292	818			
Cost per passenger (based on 80m), £				4	10			
Cost per night passenger (assuming ~10% of passengers flown), £				37	102			

~2-3x

Noise impacts from annoyance and other health impacts like hypertension still need to be added in

## Negative Financial Impacts of Heathrow Noise per annum (based on DfT TAG approach)

£, pa	Defra 2014	WHO 2018
Annoyance	294m	860m
Sleep Disturbance	292m	818m
Other Health Impacts (Estimate) incl dementia, strokes and heart attack	150m	150m
<b>Total</b>	<b>736m</b>	<b>1,828m</b>

### Heathrow negative noise impacts range from £0.75bn to £2bn per annum

Passengers should be paying between £10 to £25 noise pollution surcharge to use Heathrow

# Conclusions and Implications

- There are major problems caused from the introduction of PBN over densely populated communities
- Heathrow is surrounded by large and high density populations
- The affects of concentration are not known – no research so difficult to take account of concentration
- Change is not taken into account in policy including in financial (TAG) modelling
  
- Present policy cannot identify the impacts of Airspace Modernisation
  
- Until these aspects are understood introduction of PBN around Heathrow should not be progressed