

Night Time Concerns (Cont'd)

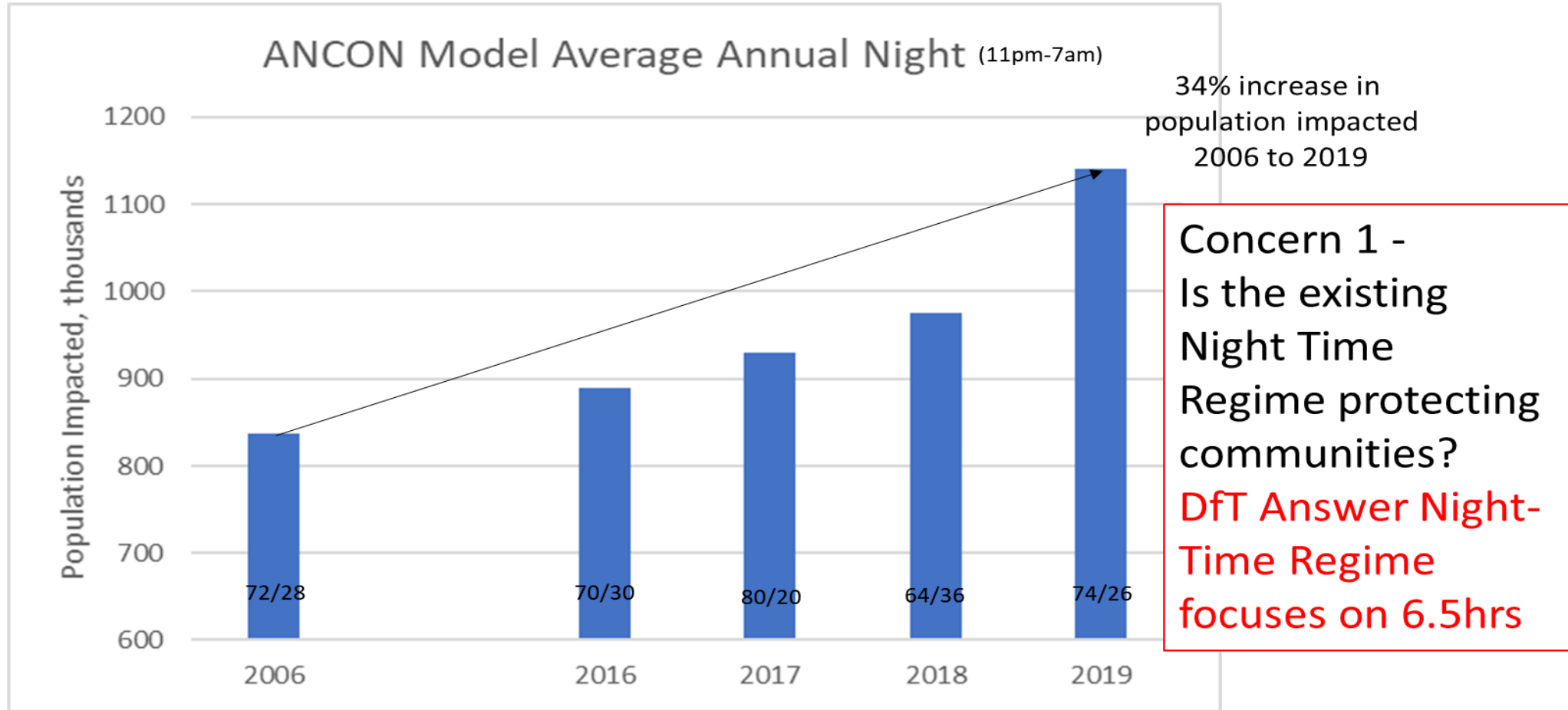
Dave Gilbert HCNF 13th July 2022

HCNG – Heathrow Communities Noise Group

ReCap - Population Impact from CAA/ERCD ANCON Modelling – for 10x Night Time N60 events

- **Concern 1** Annual night numbers shows significant increase in population impact from 2006 to today

1 million



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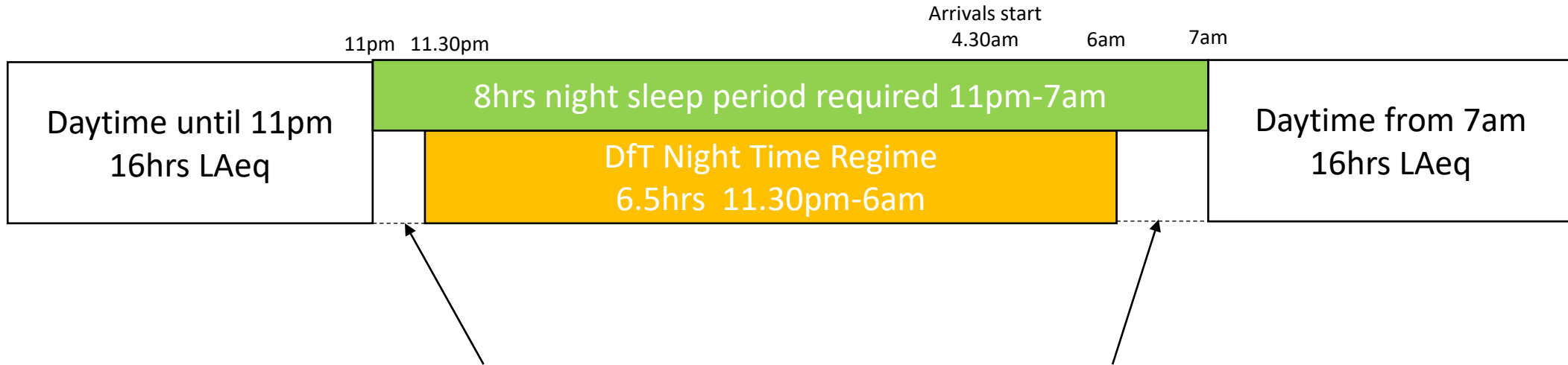
Sources – CAA reports CAP 1701, 1801, 1901, 2001

Acronyms; ERCD - Environmental Research and Consultancy Department. ANCON - Aircraft Noise Contour Model,

Average 2015/19
split - 72/28

Concern 1 -
Is the existing
Night Time
Regime protecting
communities?
**DfT Answer Night-
Time Regime
focuses on 6.5hrs**

Regulation of Aircraft Noise at Night – Night Time ‘Gap’



- How are the important shoulder hrs regulated?
- If not regulated flights can be pushed into this period reducing the 16hr LAeq number
- Is part of the 34% increase seen due to more flights being pushed into this period

Night Noise Guidelines (NNG) for Europe 2009

are harmful to health. The NNG summarise the relationship between night noise and health effects into four ranges of continuous outside sound level at night (L_{night}):

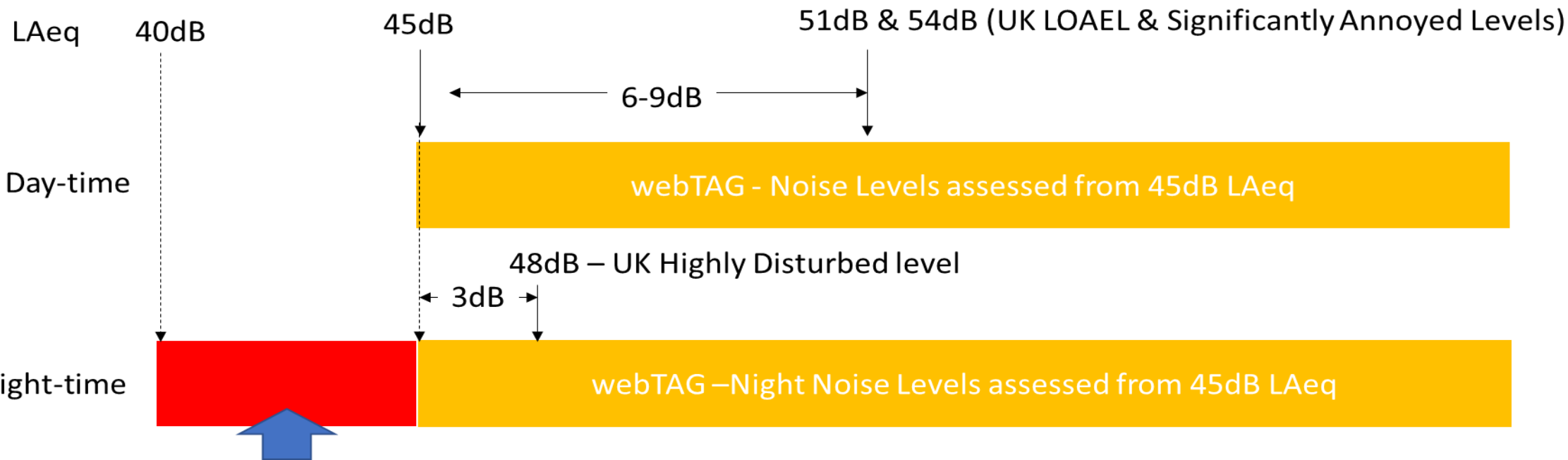
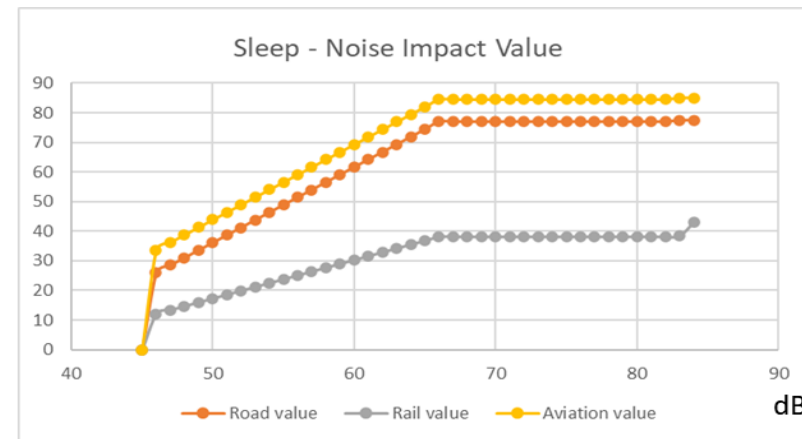
- “<30 dB - Although individual sensitivities and circumstances differ, it appears that up to this level no substantial biological effects are observed.
- 30-40 dB - A number of effects on sleep are observed from this range: Body movements, awakening, self-reported sleep disturbance, and arousals. The intensity of the effect depends on the nature of the source and the number of events. Vulnerable groups (e.g., children, the chronically ill and the elderly) are more susceptible. However, even in the worst cases the effects seem modest.
- 40-55 dB - Adverse health effects are observed among the exposed population. Many people have to adapt their lives to cope with the noise at night. Vulnerable groups are more severely affected.
- >55 dB - The situation is considered increasingly dangerous for public health. Adverse health effects occur frequently, a sizeable proportion of the population is highly annoyed and sleep disturbed. There is evidence that the risk of cardiovascular disease increases”.



Key point on this slide -
People are adversely affected
by night noise from 40dB

Financial Assessment Night Noise to support decision making - webTAG

- Disability Adjusted Life Years – ‘DALYs’ calculated from relationships of noise exposure and impacts (Health, Annoyance and sleep disturbance)
- webTAG uses 16hrs LAeq and 8hr Night – no ‘GAP’ so ok
- But Daytime & Night time impacts are both calculated on the same LAeq scale



Around Heathrow Missing Millions not included in Night Time Noise Evaluation/Decision making

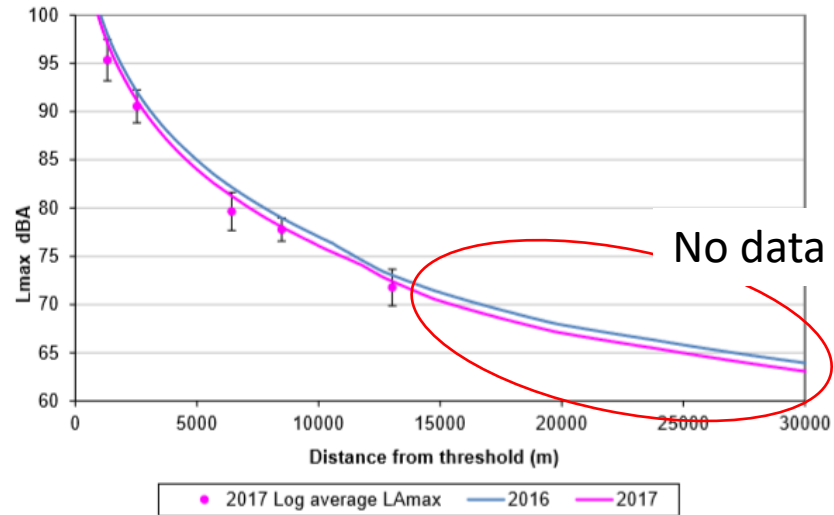
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Questions for DfT

- What is the logic for only 6.5hrs?
- How are the important night time shoulder hours regulated (11-11.30pm and 6-7am)?
- When will webTAG be adjusted to include those impacted between 40-45dB LAeq at night to get correct financial evaluation of night noise impacts?
- Given the high numbers of people impacted at 40-45dB levels around Heathrow and the addition negative financial impact how will DfT tighten the night time regime around Heathrow?

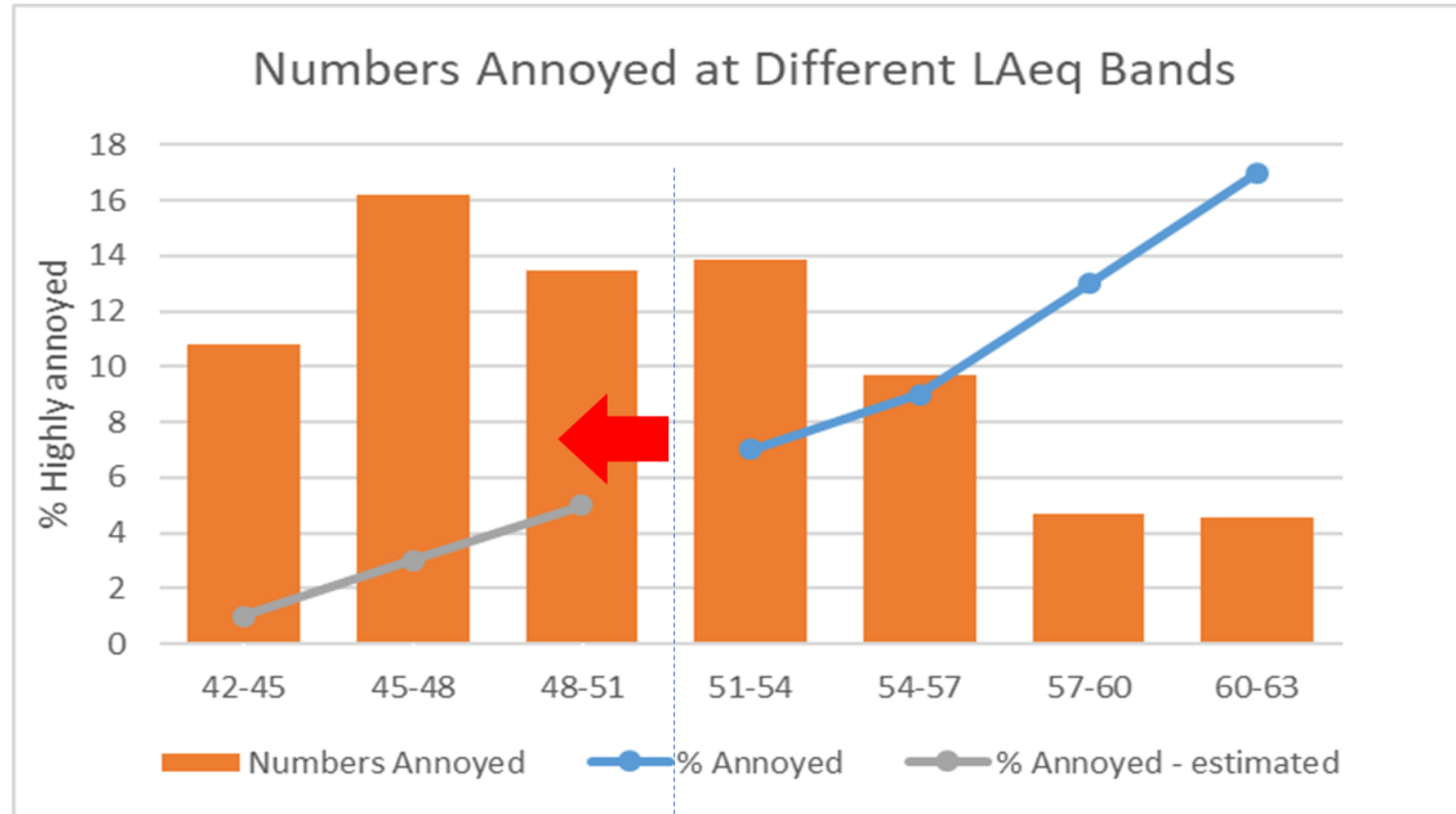
Recap Concern 2 - Noise Model Validation at 60dB LAmax

Figure E8 Boeing 777-300ER/GE engines arrival L_{max}



Noise monitors can be placed in areas with low background noise

Highly Annoyed Numbers below 51dB LAeq LOAEL



50% of people Highly annoyed are below 51dB LAeq

Numbers calculated using FoI figures of numbers in noise bands in 2030

This analysis should be undertaken and shared by the responsible Government Departments