

NOISE RELIEF

A STUDY OF HOW TO GET IT NOW

- This report contains four proposals which aim to improve the noise climate for communities under the Heathrow flight paths.
- The proposals try to address key concerns which residents have raised with us.
- The proposals are not intended as a panacea to all the noise problems faced by all communities.
- The aim of these proposals is to provide some relief from noise in advance of the major changes to its flights paths which Heathrow expects to introduce from about 2025 onwards.

1. STAGGER THE ARRIVALS JOIN POINT

2. INCREASE VARIATION IN DEPARTURE ROUTES

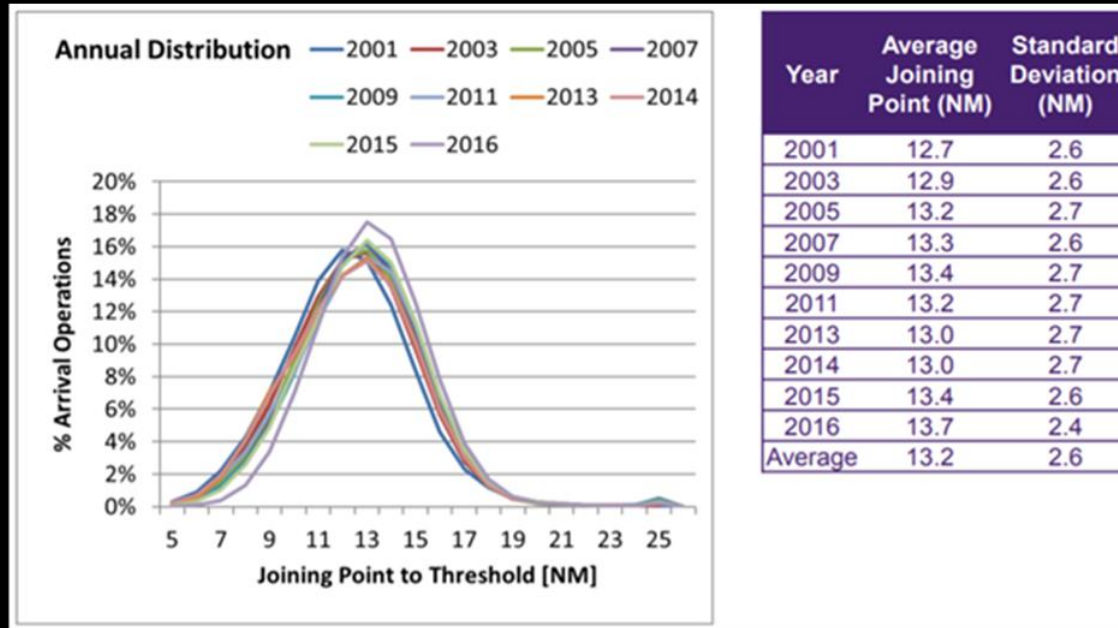
3. PROMOTE FAIRER NIGHT FLIGHT ARRIVAL DISTRIBUTION

4. REDUCE SIMULTANEOUS OVERFLIGHT BY LCY & LHR
ARRIVALS

1. STAGGER THE ARRIVALS JOIN POINT

Curve 2016:

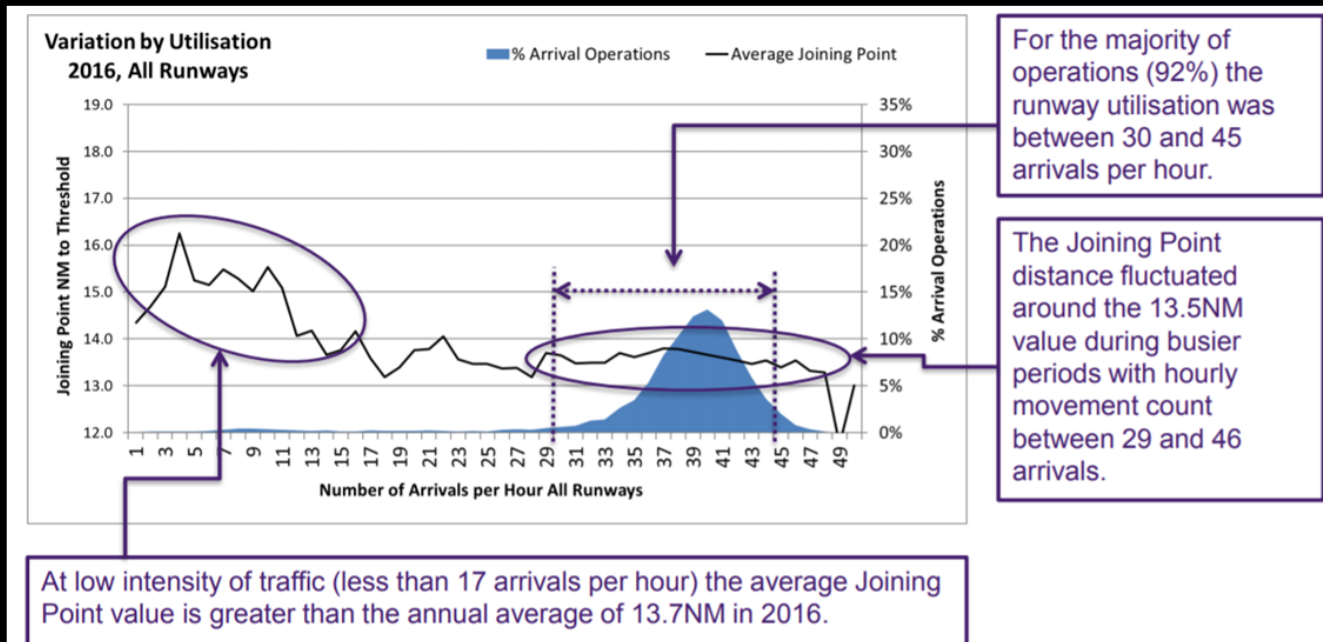
- Is steepest showing concentration increase
- Shows markedly fewer arrivals below 10 NM



The Standard Deviation data given for 2016 shows:

- 95% of planes joined the final approach between 9.9 and 18.5 nm from runway
- 68% of planes joined the final approach between 11.3 and 16.1 nm from runway
- The average joining point was 13.7 nm from runway

2016



2 extremes can be seen at:

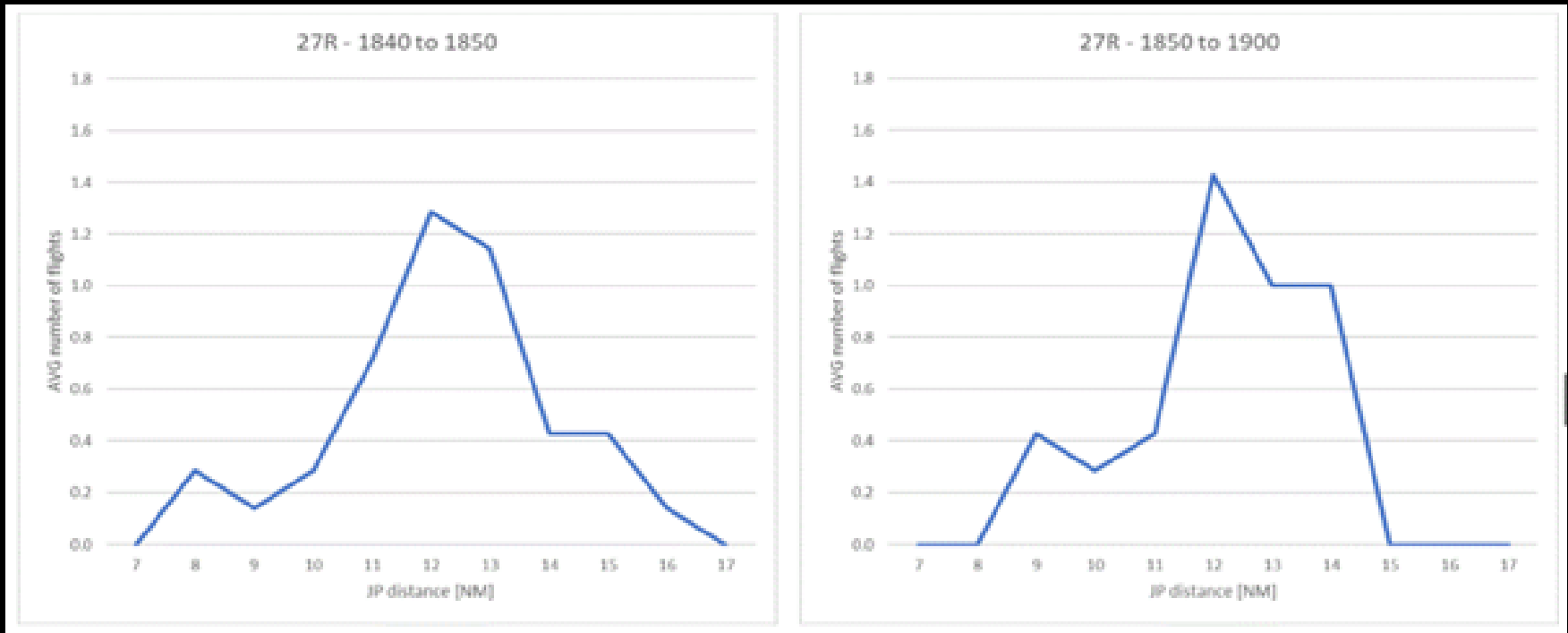
1 - 10 arrivals per hour
36 - 44 arrivals per hour

- **During the busiest times** of the day when there are 36-44 arrivals per hour, the joining point averages at 13.7nm and a high percentage of planes use this.
- **During quieter periods** the percentage joining even further out is also high, albeit of a much smaller number of arrivals.

Arrivals Bunching 1

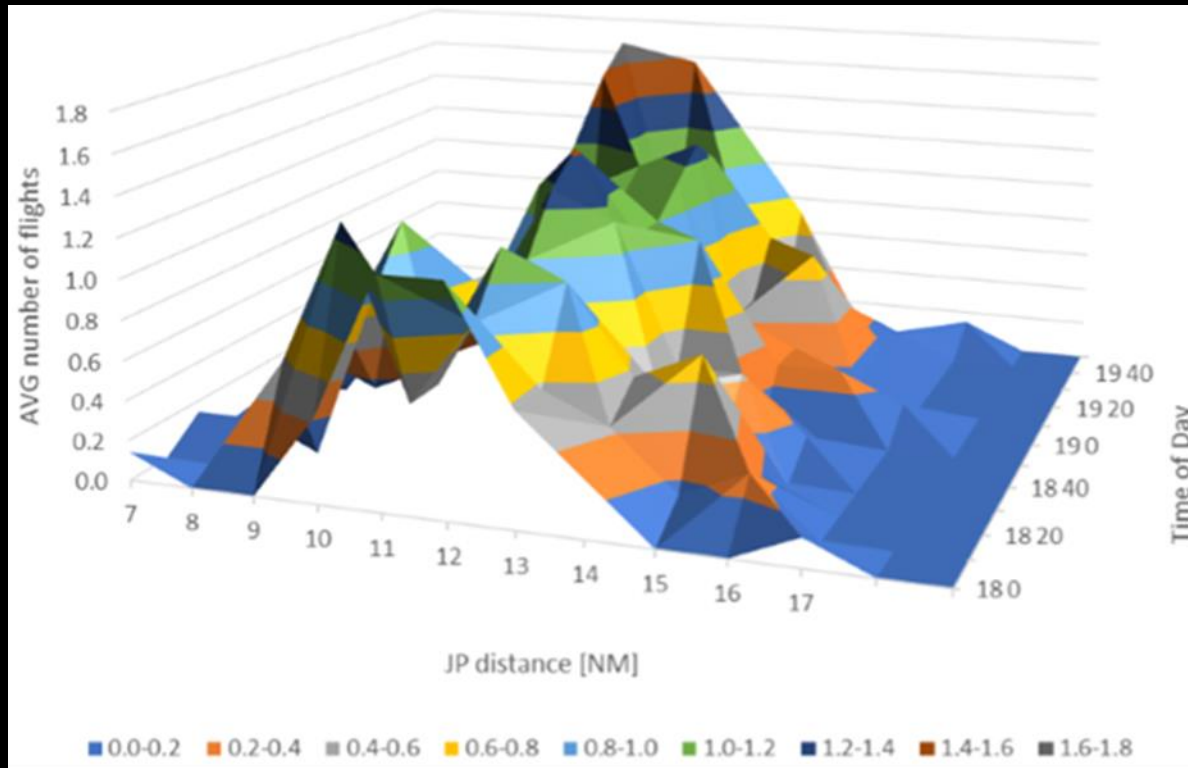
2018

- 18:40 – 18:50 runway 27R, averaged over 7 days of data. Shallow peak 11 - 13 NM
- 18:50 – 19:00 runway 27R, averaged over 7 days of data. Sharp peak at 12 NM

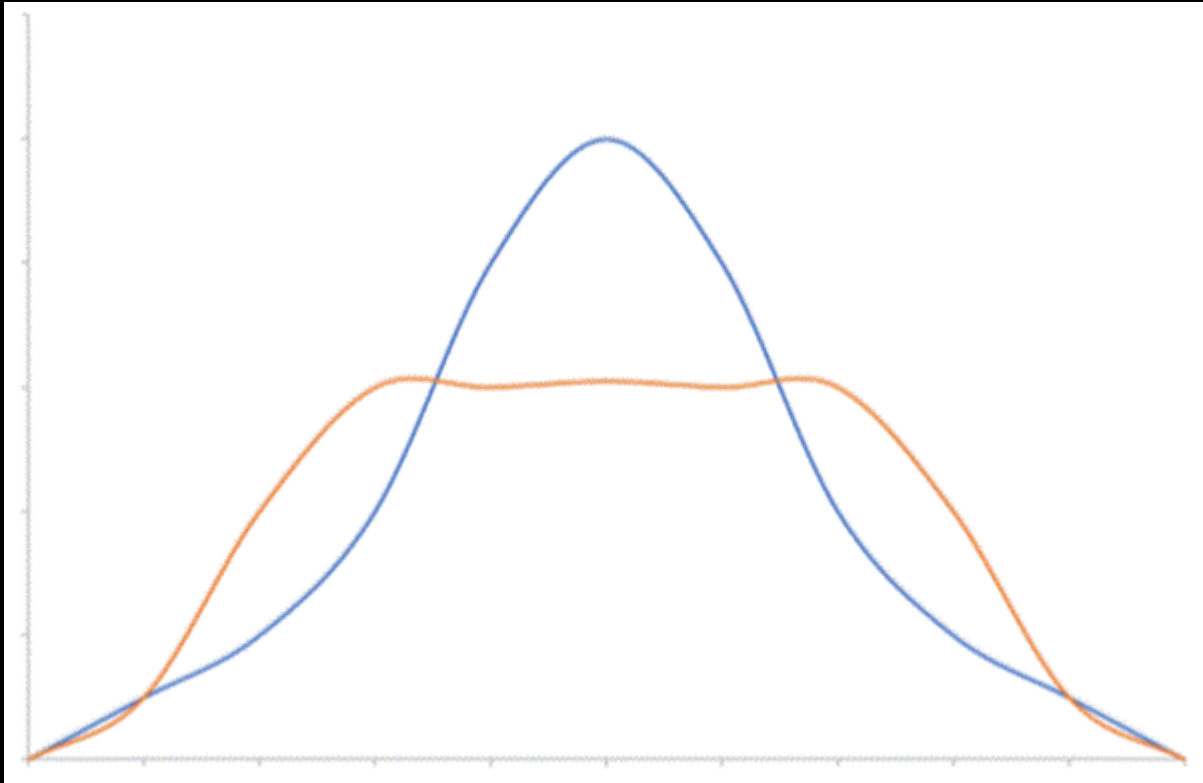


Arrivals Bunching 2

2018 Average join point averaged in 10 minute sample periods over 91 days



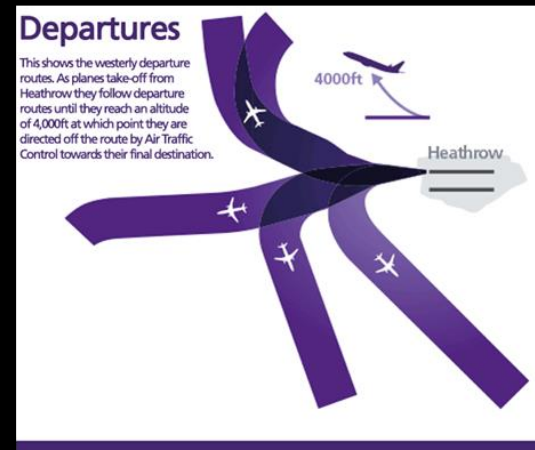
RELIEF PROPOSAL 1



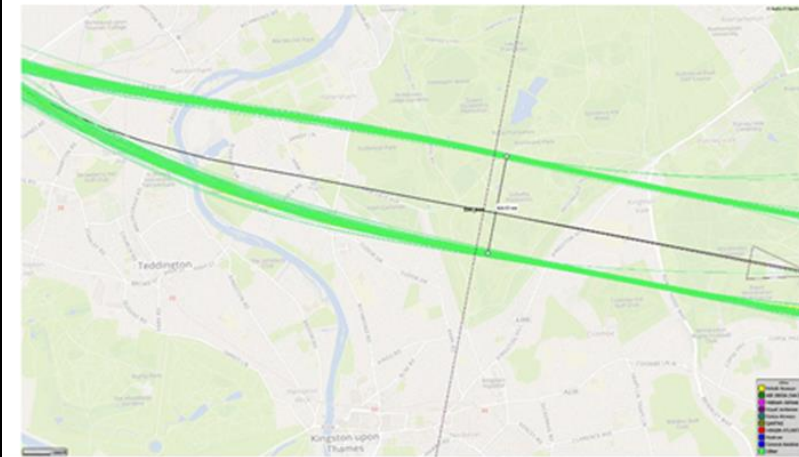
2. INCREASE VARIATION IN DEPARTURE ROUTES

Noise Preferential Route (NPR) since 1960s are now 3 km wide.

- Current trend is to take off close to the centreline of the NPR
- Previously there was dispersal across the width of the NPR



Screenshot showing result of coding differences - tracks can still be within NPR



RELIEF PROPOSAL 2

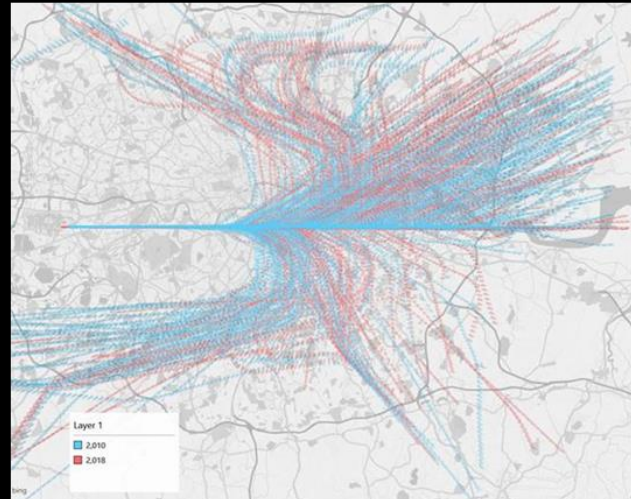
- Vary flight paths within an NPR
- Use the programmed codes to specify different paths within each NPR

3. PROMOTE FAIRER NIGHT FLIGHT ARRIVAL DISTRIBUTION

Paths of flights arriving before 06:00 hrs are becoming less varied

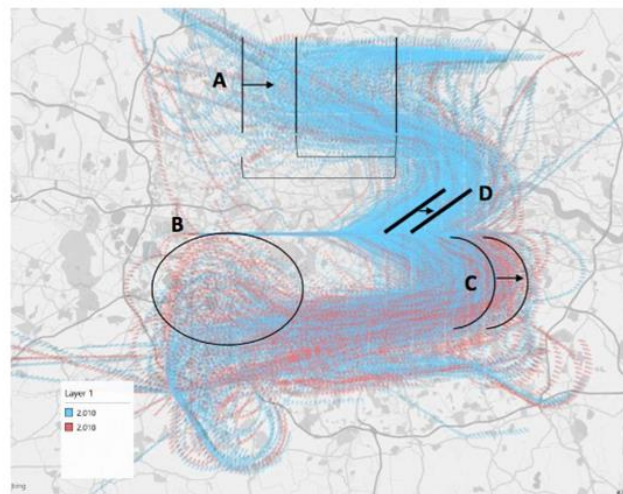
04:30 – 06:00

2010 BLUE
2018 PINK



2010 & 2018

- A. 2018 flights turning earlier than 2010; turn line shifted to the East
- B. Flights leaving stack drift more to the North in 2018
- C. Final turn from the South shifted towards East in 2018
- D. 2018 line shifted to the East compared to 2010 (taking into account traffic volume difference – 2010 saw much more traffic approaching from the North)



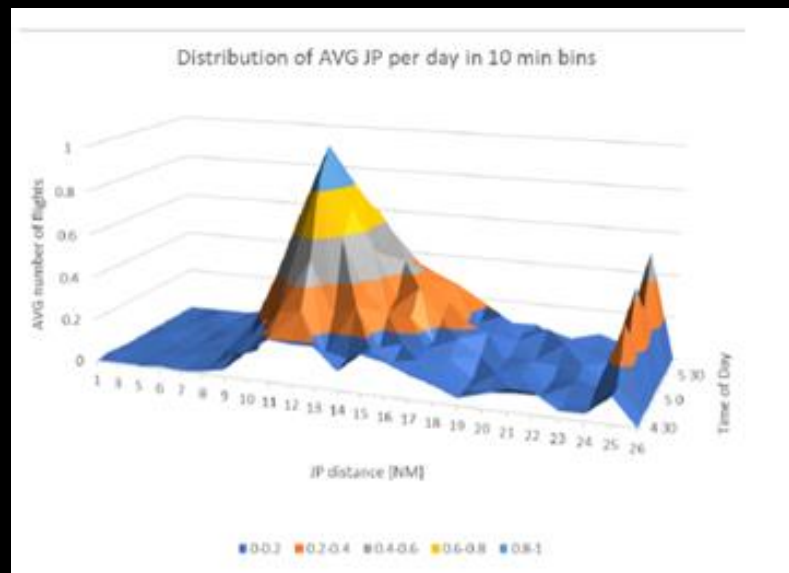
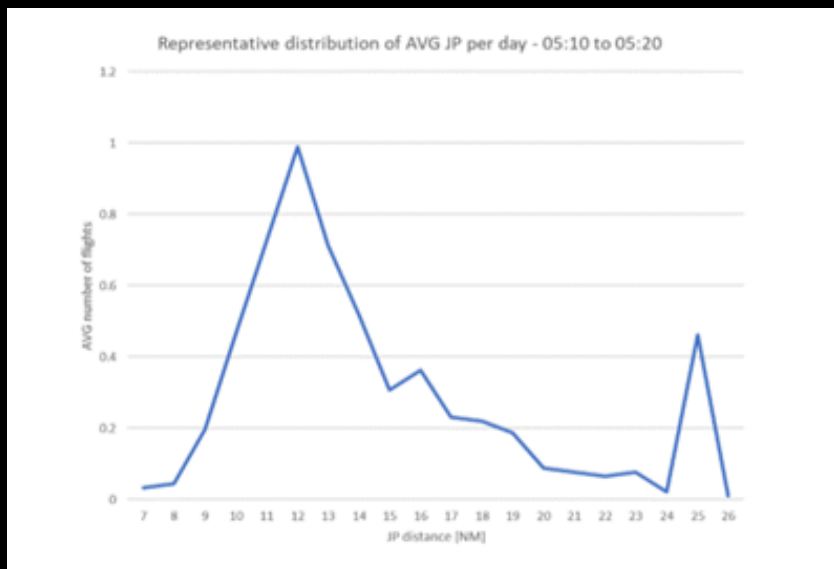
06:00 – 07:00

Arrivals Bunching 3

- 16-18 scheduled arrivals from 23:30 and 06:00 hrs
- Late arrivals and departures can inflate this figure

2018 Average join point averaged in 10 minute sample periods over 91 days

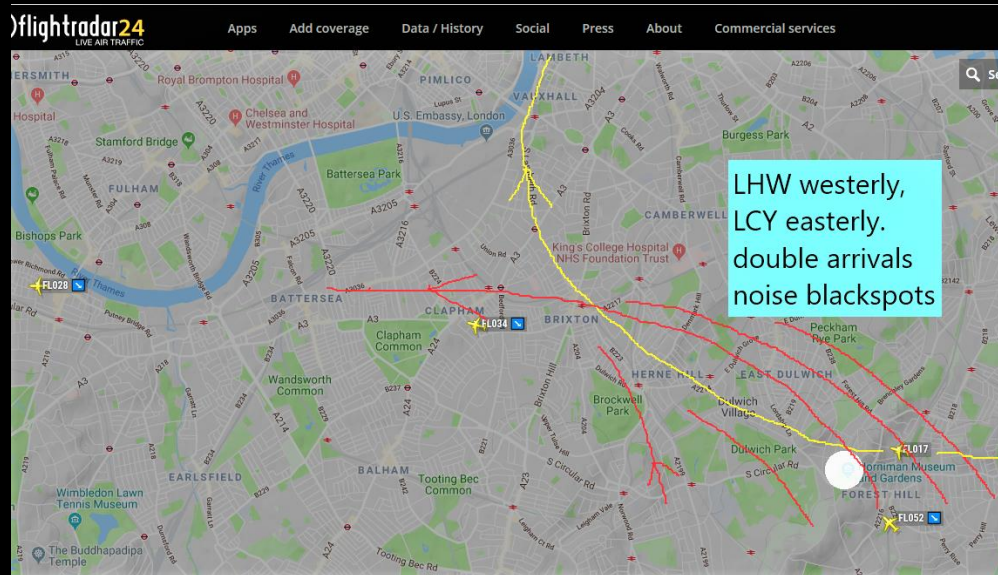
05:10 – 05:20 hrs - peak time



RELIEF PROPOSAL 3

Air traffic controllers should vary these arrival routes

4. REDUCE SIMULTANEOUS OVERFLIGHT BY LCY & LHR ARRIVALS



RELIEF PROPOSAL 4

LHR & LCY discuss how to stop using the same arrivals airspace both

- Simultaneously &
- Switching one airspace user for another

Thanks for assistance with both data and advice to
Heathrow Airport and NATS