

# Englefield Green Data Analysis

## **Overall summary**

- The number of departing aircraft using each of the 3 routes has increased since 2005
- Aircraft on westerly departure routes (MID and DVR) are flying lower, while aircraft on the easterly departure route (CPT) are flying higher
- Shift of traffic to the north west toward Englefield Green on all 3 routes
- Increase of A380s on westerly MID and DVR routes has increased from 1% to 6%
- Increase of large aircraft going to more long-haul destinations on easterly DVR route
- Flights affected by airspace trials (westerly MID route) have returned to how they were before the trials
- Englefield Green is approximately 150 feet higher than Heathrow (the baseline for height measurement)

## **Westerly departures**

Overall westerly traffic through the gate appears to have increased from approximately 215 flights per day in 2005, 227 flights in 2010 and approximately 245 flights in 2015. There was a large increase to 375 per day associated with 2014 trials.

## **MID**

### **Numbers**

- The number of aircraft through the gate has increased from 45 per westerly day in 2010 to 49 per westerly day in 2015.
- There was a large increase in the number of flights through the gate during airspace trials in 2014, at approximately 200 per day.

### **Altitude**

- This route has seen a downward trend of aircraft crossing the gate from 3800ft in 2005 to 3500ft in 2015, with an increase in the number of aircraft at 1500ft and 2000ft.
- The height that the lowest flight crosses the gate each day is decreasing - in 2014 and 2015 the lowest flights consistently approached 1500 feet.
- There is a cyclical pattern in the height aircraft through the gate indicating that flights are lower in summer than in winter.

### **Distribution**

- The departure trials in 2014 had a marked impact on the distribution and structure of traffic using the MID SID and increased the traffic crossing the gate. After the trials ended, the structure and traffic levels reverted to those observed pre-trial.

- Traffic has moved very slightly to the north-west from 2005 to 2015 although there is considerable scatter from day-to-day.
- More recently after the end of the trials in late 2014, the traffic has moved back towards the south-east. However, the shift was gradual to mid June 2015 when there was a perceptible step change around 500 metres.

## **Westerly departures - DVR**

### **Numbers**

- The number of aircraft through gate increased from approximately 137 per westerly day in 2010 to approximately 156 per westerly day in 2015.

### **Altitude**

- The height of flights using the DVR route has remained consistent from 2005 to 2014, but the lowest flights have got lower since the beginning of 2014 by around 200ft.
- There is a cyclical pattern in the height aircraft through the gate indicating that flights are lower in summer than in winter.

### **Distribution**

- Traffic has moved approximately 400m north west from 2005 to 2015 from Egham towards Englefield Green (half of this shift occurred between 2010 and 2015) and the trend has continued more recently.
- The number of aircraft per day flying over the area has increased from 227 in 2010 to 245 in 2015. This number peaked at 267 during the departure trials in 2014.

## **Westerly departures (MID & DVR) - Aircraft types**

- The proportion of heavy aircraft flying through the gate on westerly operations has remained relatively unchanged; however the proportion of A380s has increased from 1% in 2010 to 6% in 2015.
- The destination mix for westerly departures crossing the gate has remained consistent over the analysis period, comprising approximately 60% short-haul and 30% ultra-long haul and long-haul flights.

## **Easterly departures - CPT**

### **Numbers**

- From 2010 to 2015, the volume of easterly traffic crossing the gate on easterly days increased from approximately 4.4 flights to 9.5 flights per easterly day.

## **Altitude**

- The height of aircraft crossing the gate appear to have increased over the period
- The daily minimum height varies widely from day-to-day from a minimum of 1500ft to a maximum of above 6000ft

## **Aircraft types**

- The proportion of large aircraft in the easterly departure fleet has increased to more than 75% of the total in 2015 from around 33% in 2010. A380s now make up 1% of the traffic.
- Consistent with this increase, the proportion of long-haul destinations served by easterly departure traffic increased from 34% in 2010 and is now approaching 74%.

## **Distribution**

- These flights are widely distributed across the gate but bunched towards the south east end, over Staines and Egham. This spread is likely due to the small number of easterly flights traversing the gate.
- The trend shows a slight shift in the position towards the north west.