

**PIR DATA PROVISION BRIEF AND CAA GUIDE TO THE PIR TRACK KEEPING DIAGRAMS SUPPLIED BY GAL FOR THE GATWICK ROUTE 5 MODIFIED RNAV SID IMPLEMENTED ON 30 MARCH 2017)**

**INTRODUCTION**

1. The PIR data received from Gatwick Airport Limited (GAL) for the period 30 March 2017 to 30 September 2017 is published on this PIR webpage. This includes a covering statement from GAL regarding their assessment of the impact of the modification.

**DATA RECEIVED AND PUBLISHED**

2. Each months' PIR data set comprises the following diagrams:
  - Track dispersion plots up to 3900ft amsl.
  - Track dispersion plots up to 4000ft amsl.
  - Track density plots.
  - Altitude band plots for 4000-5000ft, 5000-6000ft, and 6000-7000ft level bands (portrayed in two different mapping formats).
  - SID usage diagrams for the three individual SID routings via Clacton, Dover and Biggin.
  - Track keeping statistics and analysis provided by GAL.
  - A monthly complaints location map (a full period version is included with September details).
3. Daily weather reports for Gatwick were also provided; however, we believe the publication of these 183 PDF documents displaying daily weather reports serves no purpose for the interpretation of the track keeping diagrams of the modified RNAV-1 SID, therefore these weather reports have not been published, but are available on request should any individual require this information.

**CAA COMPARISON SLIDES**

4. It may be difficult to understand the impacts of the change without reference to the diagrams provided in the CAA 2015 PIR report. Therefore, in order to determine any difference in flight paths arising from the modification on 30 March 2017, the CAA has combined track keeping diagrams from the 2015 PIR report with the diagrams provided by GAL for the period of May 2017. These comparison diagrams will be used in our PIR report whenever our assessment of the modification is complete.

## GUIDE TO THE INTERPRETATION OF THE DIAGRAMS

5. **Track dispersion diagrams.** These portray each aircraft track on a map, based on radar data. Tracks are overlaid upon each other, such that if many tracks are overlaid on top of each other, individual tracks may no longer be visible. They are useful for illustrating the dispersion of the traffic pattern, but are not as useful for determining the density/concentration of tracks.
6. **Track density diagrams.** These portray the concentration of flight tracks using a colour code to indicate differing concentrations of flight tracks. They are sometimes referred to as “heat plot” diagrams. Whilst they can be used to illustrate traffic dispersion, they are most useful for illustrating if traffic is concentrated along a route or over a geographic location. Depending on the key used for portraying track concentration, individual tracks towards the outer limits of the dispersion may not be visible on the diagram.
7. **CAA Comparison Slides.**
  - Up to 4000ft and Density plots. The 2013 conventional SID traffic patterns, and 2014 RNAV-1 traffic patterns appear first, followed by the conventional and RNAV traffic pattern for the May 2017 period. To simplify comparison, the last 3 slides then show the comparison of traffic patterns between the 2013 conventional SID, the 2014 RNAV-1 SID and the modified 2017 RNAV-1 SID.
  - Altitude band plots. The slide sets show the comparison between the 2013, 2014 and 2017 patterns for each presentation format, commencing with the 4000ft – 5000ft level band in the first set, then the remaining two altitude band sets thereafter.
8. **Diagram format.** The software program used by GAL to produce the diagrams changed since the original PIR data was produced, hence the 2017 diagram format differs from the 2013 and 2014 traffic samples.