

Safety and Airspace Regulation Group



7 November 2014

[REDACTED]
Gatwick Airport Limited

Dear [REDACTED]

GATWICK RNAV SIDS POST IMPLEMENTATION REVIEW

In our RNAV SIDs decision letter of 14 August 2013 to Gatwick Airport Ltd (GAL), we highlighted a regulatory requirement to commence the process of a Post Implementation Review (PIR) one year after implementation of the RNAV SIDs Airspace Change Proposal (ACP) on 14 November 2013.

The objective of a PIR is set out in the CAA's published policy statement available here: <http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=4823>.

In summary however, the purpose of a PIR is to identify any operational issues, review whether the airspace change has delivered the expected impacts and benefits, and in the light of that assessment to consider whether it may be necessary to bring about any subsequent refinements to the subject airspace and the ATC patterns and procedures within it. Under that process it is the change proposer's role to gather the data necessary for the CAA to carry out the review.

The information which we need you to provide regarding the RNAV SIDs implementation in order that the CAA can carry out that assessment, is set out below. [REDACTED] has advised me that he would be assisting you with certain elements under the NATS contracted arrangements for the ACP work, hence I have copied this to [REDACTED] as well.

After the CAA completes the PIR assessment, we will publish our conclusions on our website. Therefore, please ensure that all diagrams you provide are appropriately labelled with periods of traffic samples and numbers of flights, as well of course, with any other detail which is appropriate to explain the diagram.

TO DEMONSTRATE IF ANTICIPATED IMPACTS AND BENEFITS HAVE BEEN DELIVERED- PIR POLICY STATEMENT PARAGRAPHS 2.2, 3.1 AND 3.3 REFER

Where the PIR Policy Statement in paragraph 3.3 refers to information which is not relevant due to the nature of the PBN SID replication, details are not required.

We have considered what specific data, in addition to the general requirements set out in the PIR Policy Statement, the CAA needs in order to carry out the PIR. The necessary data that the CAA has identified to date is set out below.

1. Provide a tabular breakdown of monthly number of flights for each route (Routes 1-9) for Conv and RNAV flights from 14 August 2013 to 14 November 2014 (covers period before the change on 14 November 2013).
2. Confirmation of date when GAL changed policy of being an 'on request' RNAV SID to RNAV SIDs becoming the default for operators.
3. GAL to identify and detail flight track variation on each route (Route 1-9) in relation to the anticipated nominal track portrayed in the RNAV SID consultation and the RNAV SIDs ACP.
4. If applicable, GAL to explain the reasons for any conclusions it has reached (and the evidence which has lead to those conclusions) as to why there are track differences regarding dispersion and concentration to those expectations (if any) portrayed in both the RNAV SID consultation and the RNAV SIDs ACP.
5. GAL to identify whether there is any apparent difference to how SIDs are being flown by different aircraft types, what evidence that action has gathered and whether there are variances with aircraft using similar or different FMS equipment.
6. With regard to all Routes, please provide specific details as indicated below:
 - a. Track data "heat" plots, (of the same quality and detail to those used in the consultation and ACP), showing track data up to 3900ft¹ with a like for like comparison (in traffic numbers) for RNAV against Conv SIDs to demonstrate the duration of flights outside the NPR lateral Swathe for one month periods for Dec 13, Mar 14, Aug 14, Sep 14 and Oct 14. Additionally, provide a comparative traffic sample for conventional SIDs from an equivalent period in the preceding year (should there be insufficient conv SIDs to compare with in the same period). The main objective is to show like for like. **Please illustrate numbers of flights and the periods on all diagrams for comparison purposes.**
 - b. Illustrate all RNAV Waypoints on the diagrams.
 - c. As per 6a but for altitude bands 4000ft - 7000ft (by 1,000ft intervals) to show when radar vectoring may take place, with pre-implementation comparatives.
 - d. To assist with evaluation of any anomalies in track deviation from that anticipated following implementation, illustrate the prevailing winds and provide any analysis of the effect these have had on track distribution for the periods provided (2000ft and 5000ft winds).
 - e. For Route 4, a representative selection of aircraft: A319/320, B738, A330, B747, B767, A380, please show **indicated** airspeeds achieved around Route 4 waypoints at KKW04, KKN06, and KKE14.
7. The CAA needs to see feedback from the regular operators concerning flyability of the SIDs. We therefore ask that you pass the following questions to the members of the FLOPSC. Responses should be returned by you with the GAL PIR submission.
 - a. How do crews receive RNAV SID clearances – are they via ATC or datalink?

¹ If vectoring is initiated on route where NPR restrictions are lowered to 3000ft provide appropriate diagrams and explanation.

- b. Comment on the lateral track keeping and report any anomalous behaviour.
 - c. Comment on the use of speed constraints in the SID designs - are they working or causing conflict with SOPs.
 - d. Comment on the vertical profiles of the SIDs - are they working or causing conflict with SOPs?
 - e. What noise abatement departure procedure (NADP) is being employed when flying the SIDs?
8. Please provide minutes of the Consultative Committee relating to these routes and their operational use.
 9. Indicate whether NPR compliance has been achieved on all routes and if not explain why, including the evidence GAL has used to reach that conclusion. If NPR compliance is not being achieved what steps has GAL taken to achieve compliance?
 10. Details of comments received from members of the public and representative groups which GAL believe are associated to RNAV SIDs with an individual breakdown on routes 1-9 for period 14 November 2013 – 14 November 2014. Please provide a database of (a) date comment received (b) name (c) postcode.
 11. Copies of any correspondence sent by GAL to local noise groups, GATCOM or the GACC in relation to these routes.
 12. Please provide track dispersion diagrams for Routes 1-9. (Please ensure these diagrams are provided in the revised format that was used for the additional inclusion of the Route 1-9 diagrams added to the RNAV consultation website on 1 October 2012 prior to the end of consultation. This will enable formal publication in the PIR report and enable all interested parties to compare the impacts of the RNAV SIDs against that portrayed in consultation.)

Note: These diagrams also need to illustrate the position of the SID design waypoints so that the CAA can analyse how the SID designs are being flown against the designed nominal tracks.
 13. Please include an option to show the 3900ft and 4000ft cut off points for comparison with the details shown in the consultation (unless the 3000ft vectoring is applied – in which case highlight where appropriate). Where feasible, colour coding should illustrate altitude attained by the relevant waypoints.
 14. Traffic samples should reflect one month periods as highlighted in paragraph 6a. Where runway utilisation would mean that these periods do not reflect enough track data, provide alternative (yet representative) months to reflect the monthly periods to illustrate the SID dispersion plots.
 15. For each route please illustrate the vectoring altitude where the restrictions of 3000ft/4000ft apply, and where aircraft are being routinely vectored off the SID and include some written explanations or reasons why aircraft are vectored in the relative positions.
 16. Prior to implementation, GAL considered that the changes would have a neutral impact upon CO₂ emissions. Please advise whether the evidence based upon actual traffic since implementation reveals whether the impact has been as expected.

17. Regarding the CAA decision letter dated 14 August 2013, Annex A paragraph 1 regulatory requirements, please advise of your results regarding the track-keeping in relation to Dormansland, and whether in GAL's view any adjustments to SID designs may be required.
18. Regarding the CAA decision letter dated 14 August 2013, Annex A paragraph 2, regulatory requirements, which stated:

'GAL is to advise the CAA of the specific post implementation track keeping assessment methodology (as highlighted in the consultation) prior to implementation. As a post implementation management oversight process proposed that should any RNAV1 SID be deemed to be of such detrimental effect, it could be withdrawn, GAL is to confirm these arrangements and provide clarity to the CAA (SARG) on what GAL deems to be a detrimental effect. GAL Monthly reports are to be provided to the SARG in a format to be agreed until such time the CAA no longer require further updates'

Please advise what the methodology is and what action GAL has taken in respect of the post implementation track keeping assessment methodology, and provide confirmation on what GAL deems to be a detrimental impact.

19. Regarding the requirement that the conventional SID be reviewed by GAL (as set out in the CAA's decision letter dated 14 August 2013, Annex A paragraph 6, regulatory requirements) what action has been taken?
20. GAL stated that there would be quarterly reports to NATMAG as part of a Monitoring Oversight Process. Have these been produced and if so, please provide copies. If not, please advise why.

SUBMISSION DEADLINE

Please provide the above details by 14 December 2014. Whilst we understand it will take time to collate the final month's data up to this date, as the diagrams we have requested are seeking data up to October 2014, we would like to commence our review as soon as possible. If the final monthly stats are not available for November by this date, we are content to receive these details as soon as they are ready but no later than close of play on 5 January 2015.

Airspace Regulation