

# CAA Operational Assessment

<b>Title of airspace change proposal</b>	Gatwick Reduced Night Noise Trial
<b>Change sponsor</b>	Gatwick Airport Ltd
<b>Project no.</b>	ACP-2018-62
<b>SARG project leader</b>	[REDACTED]
<i>Case study commencement date</i>	11 November 2022
<i>Case study report as at</i>	20 Dec 2023

## Instructions

In providing a response for each question, please ensure that the 'status' column is completed using the following options:

- yes
- no
- partially
- n/a

To aid the SARG project leader's efficient project management it may be useful that each question is also highlighted accordingly to illustrate what is:

resolved Green not resolved Amber not compliant Red

## Executive Summary

This ACP proposes a temporary trial to enable Gatwick Airport to run a trial for night-time arrivals to determine if the use of PBN routes can reduce the noise impact of outlier flight arrival events.

The airspace trial proposes the use of 8 instrument flight procedures using the *RNP1 with RF turns* standard of performance. These procedures will be utilised by those aircraft suitably equipped from 0130- 0500 hours (local time) each night, for a period of 6 months (from 0130hrs 11th January 2024 to 0500hrs 12th July 2024), and includes easterly and westerly arrivals to each of the runway ends of the southern runway (08R/26L).

1.	Justification for change and options analysis (operational/technical)	Status
1.1	Is the explanation of the proposed change clear and understood?	YES
The reduced night noise trial is required to support the investigation of potential benefits in respect of reducing noise impact on stakeholders on the ground, due to flights during night-time operations (specifically 0130-0500 local).		
1.2	Are the reasons for the change stated and acceptable?	YES
Yes, the temporary trial will allow data collection. The objective is that the trial will demonstrate an improvement in noise impact.		
1.3	Have all appropriate alternative options been considered, including the 'do nothing' option?	N/A

This trial represents one possible option for affecting some improvement in the impact of night-time noise.

1.4

Is the justification for the selection of the proposed option sound and acceptable?


YES

It aligns with existing policy and provided that the Safety Case and IFP evaluation is accepted by the CAA, then establishing the use of PBN procedures for use during night time operations is acceptable.

2.	Airspace description and operational arrangement	Status																
2.1	Is the type of proposed airspace design clearly stated and understood?	YES																
The design is clearly described including charts of the proposed RNAV instrument flight procedures.																		
2.2	Are the hours of operation of the airspace and any seasonal variations stated and acceptable?	YES																
The trial will take place for a limited period from 0130- 0500 hours (local time) each night, for a period of 6 months (from 0130hrs 11 <sup>th</sup> January 2024 to 0500hrs 12th July 2024).																		
2.3	Is any interaction with adjacent domestic and international airspace structures stated and acceptable including an explanation of how connectivity is to be achieved? Has the agreement of adjacent States been secured in respect of High Seas airspace changes?	N/A																
The interaction with adjacent ATC units has been subject to engagement, and coordination agreed. This includes agreement of precisely when the first and last aircraft will be assigned the trial procedures. The trial procedure will commence when an aircraft is predicted to be over the first waypoint in the trial procedure. Aircraft that overfly the first waypoint between 01:30 and 05:00 will be instructed to fly the PBN procedure. Aircraft will land at the airport approximately 7 minutes later after joining the trial procedure at 6,000ft.																		
2.4	Is the supporting statistical evidence relevant and acceptable?	YES																
Statistics of the historic number of flights per day have been given (outlined below):																		
<table><tr><td></td><td>2017</td><td>2018</td><td>2019</td></tr><tr><td>Total Feb-Jul</td><td>1658</td><td>1985</td><td>2076</td></tr><tr><td>Average per night (0130-0500)</td><td>9.2</td><td>11.0</td><td>11.5</td></tr><tr><td>Max per night</td><td>33</td><td>41</td><td>44</td></tr></table>				2017	2018	2019	Total Feb-Jul	1658	1985	2076	Average per night (0130-0500)	9.2	11.0	11.5	Max per night	33	41	44
	2017	2018	2019															
Total Feb-Jul	1658	1985	2076															
Average per night (0130-0500)	9.2	11.0	11.5															
Max per night	33	41	44															
(see Trial submission document Table 1 for more detail).																		
This provides an indication of the order of magnitude of flights to be included in the trial. The purpose of the trial is to gather more statistical data particularly with respect to the noise impact of the more precisely flown RNAV procedures.																		
2.5	Is the analysis of the impact of the traffic mix on complexity and workload of operations complete and satisfactory?	Yes																
Complexity and workload of the trial operations are not expected to be different from extant.																		
2.6	Are any draft Letters of Agreement and/or Memoranda of Understanding included and, if so, do they contain the commitments to resolve ATS procedures (ATSD) and airspace management requirements?	N/A																
N/A																		

2.7	Should there be any other aviation activity (low flying, gliding, parachuting, microlight site etc) in the vicinity of the new airspace structure and no suitable operating agreements or ATC Procedures can be devised, what action has the change sponsor carried out to resolve any conflicting interests?	N/A
n/a		
2.8	Is the evidence that the airspace design is compliant with ICAO SARPs, airspace design & FUA regulations, and Eurocontrol guidance satisfactory?	N/A
No change to airspace. The proposed procedures are contained within the extant Gatwick CTR/CTA, Class D airspace.		
2.9	Is the proposed airspace classification stated and justification for that classification acceptable?	YES
No change in airspace classification.		
2.10	Within the constraints of safety and efficiency, does the airspace classification permit access to as many classes of user as practicable?	YES
No change to extant.		
2.11	Is there assurance, as far as practicable, against unauthorised incursions? (This is usually done through the classification and promulgation.)	YES
As per extant, Class D airspace classification..		
2.12	Is there a commitment to allow access to all airspace users seeking a transit through controlled airspace as per the classification, or in the event of such a request being denied, a service around the affected area?	YES
Yes in accordance with the Class D classification.		
2.13	Are appropriate arrangements for transiting aircraft in place in accordance with stated commitments?	YES
No change from extant.		
2.14	Are any airspace user group's requirements not met?	NO



No adverse feedback received from airspace users.		
2.15	Is any delegation of ATS justified and acceptable? (If yes, refer to Delegated ATS Procedure).	N/A
N/A.		
2.16	Is the airspace design of sufficient dimensions with regard to expected aircraft navigation performance and manoeuvrability to contain horizontal and vertical flight activity (including holding patterns) and associated protected areas in both radar and non-radar environments?	YES
All IFPs are contained within the extant Gatwick CTA/CTR, and are within the existing vectoring swathe for arrivals. Proposed IFPs are in blue below.		
		
2.17	Have all safety buffer requirements (or mitigation of these) been identified and described satisfactorily (to be in accordance with the agreed parameters or show acceptable mitigation)?	YES
2.18	Do ATC procedures ensure the maintenance of prescribed separation between traffic inside a new airspace structure and traffic within existing adjacent or other new airspace structures?	YES
RNAV procedures ensure higher degree of reliability of track-keeping, thus assist in maintaining separation between aircraft on the procedure and those in the adjacent uncontrolled airspace.		
2.19	Is the airspace structure designed to ensure that adequate and appropriate terrain clearance can be readily applied within and adjacent to the proposed airspace?	YES

IFP evaluation of obstacle clearance data ensures adequate clearance.		
2.20	If the new structure lies close to another airspace structure or overlaps an associated airspace structure, have appropriate operating arrangements been agreed?	YES
Operating arrangements between Gatwick TC and NERL are agreed.		
2.21	Where terminal and en-route structures adjoin, is the effective integration of departure and arrival routes achieved?	YES
Departures unaffected. For arrivals, the proposed transitions link with the current holding points. There is no change to the interface with enroute.		
<b>3. Supporting resources and communications, navigation and surveillance (CNS) infrastructure</b>		<b>Status</b>
3.1	Is the evidence of supporting CNS infrastructure together with availability and contingency procedures complete and acceptable? The following are to be satisfied:	
	<ul style="list-style-type: none"> <li><b>Communication:</b> Is the evidence of communications infrastructure including RT coverage together with availability and contingency procedures complete and acceptable? Has this frequency been agreed with AAA Infrastructure?</li> </ul>	YES
No change.		
	<ul style="list-style-type: none"> <li><b>Navigation:</b> Is there sufficient accurate navigational guidance based on in-line VOR or NDB or by approved RNAV-derived sources, to contain the aircraft within the route to the published RNP value in accordance with ICAO/ Eurocontrol standards? For example, for nav aids, has coverage assessment been made, such as a DEMETER report, and if so, is it satisfactory?</li> </ul>	YES
Gatwick airport has numerous RNAV IFPs currently in use and coverage is demonstrably sufficient. (DEMETER coverage plots submitted for previous RNAV implementations.)		
	<ul style="list-style-type: none"> <li><b>Surveillance:</b> Radar provision – have radar diagrams been provided, and do they show that the ATS route/airspace structure can be supported?</li> </ul>	YES
The area concerned is used routinely for conventional arrivals and departures and primary and secondary Radar coverage are demonstrably adequate in this area.		
3.2	Where appropriate, are there any indications of the resources to be applied, or a commitment to provide them, in line with current forecast traffic growth acceptable?	N/A

The proposed trial procedures do not change the resourcing requirement, or enable growth.		
<b>4.</b>	<b>Maps/charts/diagrams</b>	<b>Status</b>
4.1	Is a diagram of the proposed airspace included in the proposal, clearly showing the dimensions and WGS84 co-ordinates?  (We would expect sponsors to include clear maps and diagrams of the proposed airspace structure(s) – they do not have to accord with aeronautical cartographical standards (see airspace change guidance), rather they should be clear and unambiguous and reflect precisely the narrative descriptions of the proposals.)	YES
See section 2.1 above.		
4.2	Do the charts clearly indicate the proposed airspace change?	YES
4.3	Has the change sponsor identified AIP pages affected by the change proposal and provided a draft amendment?	YES
A draft TOI has been developed by NATS.		
4.4	Has the change sponsor completed the WGS84 spreadsheet and submitted to the CAA for approval?	N/A
There is no requirement for the trial sponsor to meet ADQ compliance for an AIC.		
<b>5.</b>	<b>Operational impact</b>	<b>Status</b>
5.1	Is the change sponsor's analysis of the impact of the change on all airspace users, airfields and traffic levels, and evidence of mitigation of the effects of the change on any of these, complete and satisfactory?  Consideration should be given to:	YES
	a) Impact on IFR General Aviation traffic, on Operational air traffic or on VFR General Aviation traffic flow in or through the area.	YES
No change.		
	b) Impact on VFR Routes.	None
No change.		
	c) Consequential effects on procedures and capacity, i.e. on SIDs, STARs, holds. Details of existing or planned routes and holds.	N/A
None.		
	d) Impact on airfields and other specific activities within or adjacent to the	YES



	proposed airspace.	
None		
	e) Any flight planning restrictions and/ or route requirements.	YES
Aircraft equipage of RNAV1 or RNP-1 with RF legs is required to participate in the trial.		
5.2	Does the change sponsor targeted engagement material reflect the likely operational impact of the change?	YES
<p>The sponsor engaged with local representatives and stakeholders through the Gatwick Noise Management Board (NMB) airspace users and industry representatives through a series of workshops plus a survey of airlines and briefings. Evidence has been provided in support of the trial proposals. The sponsor engaged directly with individuals at the organisations by emailing them and following up. Within the engagement materials, the sponsor explained how feedback can be submitted and invited stakeholders to provide detail on any potential impacts of the proposal on their activities and requested suggestions as to possible mitigations. The sponsor received responses from the majority of stakeholders engaged as part of the process, and all who responded were content with the proposals.</p> <p>The material used included relevant information to reflect the likely operational impact including draft charts of the proposed procedures.</p>		
Case study conclusions – to be completed by SARG project leader		Yes/No
Has the change sponsor met the SARG airspace change proposal requirements and airspace regulatory requirements above?		YES
The sponsor has met all CAP1616 ACP requirements for a temporary airspace change.		
RECOMMENDATIONS/CONDITIONS/PIR DATA REQUIREMENTS		
Are there any Recommendations which the change sponsor should try to address either before or after implementation (if approved)? If yes, please list them below.		NO
Are there any Condition(s) which the change sponsor <u>must fulfil</u> either before or after implementation (if approved)? If yes, please list them below.		Yes
<p><b>GUIDANCE NOTE:</b> Conditions are something that the change sponsor <u>must fulfil</u> either before or after implementation, if indeed the airspace change proposal is approved. If their proposal is approved, change sponsors <u>must observe</u> any condition(s) contained within the regulatory decision; failure to do so <u>will usually</u> result in the approval being revoked. Conditions should specify the consequence of failing to meet that condition, whether that be revoking the ACP or some alternative.</p> <ul style="list-style-type: none"> <li>The procedures for this activity must be approved by the relevant ATS Inspector before any NOTAMs are raised to activate the TDA.</li> <li>The full range of stakeholder groups must be informed of the CAA's regulatory decision, provided with confirmation of when the decision will be implemented and be made fully aware of the contents of any related Temporary Operating Instructions as required, and specifically the actions to take should access to the TDA be required. This should also include local councils.</li> </ul>		



- While the temporary change is in operation, the sponsor must undertake regular engagement with stakeholders.

Are there any specific requirements in terms of the data to be collected by the change sponsor for the Post Implementation Review (if approved)? If yes, please list them below.

Yes

- Log of all flights during the trial period. The log must record which flights were able to participate in the trial, and which were not, with reason why for those unable to participate.
- If the trial has to be suspended for any reason, this must be recorded on the log.
- Flight path data (position & altitude) for all flights should be captured and stored to facilitate PIR analysis of flight path distribution and conformance to the published procedures.

### General summary

This ACP is to trial the use of PBN approach transitions during the night-time. This will replace the current practice of ATC radar vectoring these flights. The intention is to increase the reliability of aircraft positioning which should in-turn reduce the noise impact of flights (particularly the impact of outliers which may have routed over areas not usually over-flown). The proposed trial period is 6 months spanning from 11<sup>th</sup> January 2024 to 12<sup>th</sup> July 2024.

### Comments and observations

The procedures were approved by the CAA ATS inspector [REDACTED] on 29 Sept 2023.

Operational assessment sign-off/ approvals	Name	Signature	Date
Operational assessment completed by:	AR Technical Regulator [REDACTED]	[REDACTED]	20/12/2023
Operational assessment approved by:	Principal Airspace Regulator [REDACTED]	[REDACTED]	20 Dec 2023

This is a proportionate design for their use case. The sponsor has fulfilled the requirements of the process; the design of the trial procedures are intended to minimise the impact on other airspace users, and stakeholders/communities on the ground.