

Safety and Airspace Regulation Group

Airspace Change Process

Post Implementation Review Data Request (Scaled)

ACP Project Reference:	ACP-2016-25		
Title of Airspace Change:	Glasgow Prestwick RNAV departure and arrival procedures		
Change Sponsor:	Glasgow Prestwick Airport (GPA)		
CAA Decision Document:	Link to ACP-2016-25 Page on CAA Website		
CAA Decision Date:	29/11/2018	AIRAC Date(s):	28/02/2019 & 05/12/2019
PIR Data Submission Requested:	November 2025	PIR Data Submission Required by:	April 2026

Introduction

1. The CAA's airspace change process is a seven-stage mechanism that is set out in detail in CAP 1616. Stage 7 of this process is a Post Implementation Review (PIR) that normally begins one year after implementation of the change. The PIR is an assessment of whether the anticipated impacts and benefits in the approved change and published decision are as expected and where there are differences, what steps (if any) the CAA requires to be taken.
2. Irrespective of whether the CAA decision to approve the change was made under the previous process (set out in CAP 725), all PIRs should normally be in accordance with the process requirements of CAP 1616. However, when assessing the expected impacts against the actual impacts, the methodology adopted at the time of the original CAA decision should be used.
3. Airspace Change Proposals can vary in size, scale and complexity, which has led the CAA to scale the PIR process appropriately. A PIR of Level 2 changes will be undertaken when it is proportionate to do so. For some changes, the CAA may proportionately reduce the extent of evidence and data required from the change sponsor or allow more flexibility in the format of the data required¹.
4. This data request form sets out that list of data required for the CAA to complete the assessment for a scaled PIR. On receipt of this data request form, the change sponsor should provide qualitative statements against each of the general observations listed below. The date on which the CAA requires the data to be submitted is stipulated at the top of this document.

¹ CAP 1616 – Para 294, 295 & Appendix H
APR-AC-TP-041

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General Observations

1. The following general observations are to enable an overview of the effectiveness of the airspace change.
2. The change sponsor is required to submit a qualitative statement against each data request which supports the conclusion reached in each case.
3. The CAA will review the analysis of the data submitted to ensure the anticipated impacts and benefits in the approved change were as expected.

a) An overview statement on whether, in the change sponsor's view, the original proposal met the intended objectives as described on the CAA's decision to approve the change.

GPA, reasons that the original proposal met the intended objectives as described in the CAA's decision to approve the change. This airspace change implemented:

- *RNAV replication of four existing conventional Standard Instrument Departures (SID).*
- *Introduction of three new RNAV SIDs: one to the east and two to the west.*
- *Five new RNAV approach transitions.*
- *"T-Bar" approaches to 3 runway ends.*

b) An overview statement on whether, in the change sponsor's view, the original proposal met any conditions described on the CAA's decision to approve the change (if applicable).

N/A - there were no conditions attached in relation to the approval of this ACP.

c) Confirm that implementation occurred on the dates identified in the Decision Letter. If no implementation date was specified in the Decision, please state so.

The CAA's Decision Letter, dated 29th November 2018, approved the introduction of new RNAV SIDs and approach transitions at GPA. The Decision Letter did not specify an implementation date; however, GPA targeted AIRAC² 03/2019 (28th February 2019) for implementation. This target date was met for the majority of the approved changes but not for the approach procedures as explained below.

Following the CAA's decision, a review of the Air Traffic Services (ATS) Safety Case identified that the proposed RNAV approach transitions were not entirely airspace contained. This presented a compliance and safety concern, resulting in the transitions being withdrawn via NOTAM³. The remainder of the approved routes were implemented as planned and published in the UK Aeronautical Information Publication (AIP) for GPA on 28th February 2019.

To resolve the containment issue, additional Instrument Flight Procedure (IFP) design work was carried out which raised the altitude of a number of waypoints on the procedures. This design change ensured adequate airspace containment and met flyability requirements. These updated procedure designs were approved by the CAA and were published in the UK AIP on the 5th of December 2019 (AIRAC 13/ 2019), completing full implementation of the intended changes.

Summary of key dates:

CAA Decision Letter: 29 November 2018

² An AIRAC – Aeronautical Information Regulation and Control – date is a globally coordinated 4-week cycle date used in aviation to ensure that all changes to aeronautical information are published and become effective at the same time. Examples of changes include new or amended SIDs and the associated updates within applicable procedures, charts and operational data.

³ A NOTAM – Notice to Air Missions – is an urgent, time-critical advisory that alerts pilots, airlines, controllers, and other aviation personnel to temporary changes or hazards that could affect flight operations.

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Initial implementation: 28th February 2019 (AIRAC 03/2019), achieved for most changes. However, approach transitions were withheld via NOTAM due to containment issues.

Final implementation: Revised procedures published in UK AIP on the 5th of December 2019 (AIRAC 13/2019)

d) If there was a significant delay between the planned and actual implementation date, please provide an explanation.

As described above, the target implementation date (28/02/2019) was met for implementing all GPA procedural changes, aside from the approach transitions. Additional safety work and design updates to the transitions were submitted to the CAA, consequently approved and implemented on the 5th December 2019.

e) Identify whether any other issues of significance have occurred during the period 12 months after date of implementation.

No significant issues occurred.

f) Other than normal promulgation activity (e.g. NOTAM, AIC etc.), identify what steps were undertaken to notify local aviation stakeholders that the airspace change was about to be implemented.

Normal promulgation activity was undertaken.

g) Feedback/complaints received from stakeholders, aviation stakeholders or the Ministry of Defence by the change sponsor in the period between implementation and post-implementation review (including feedback/complaints received via an FCS 1522 Form (UK Airspace Access or Refusal of ATS Report)).

GPA received no feedback or complaints from any aviation stakeholders, including the MoD, following the implementation of the RNAV procedures.

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Other information of relevance (if appropriate)

- h) GPA have collated the following quantitative and qualitative information to support this PIR:
1. Safety Data.
 2. Operational feedback from ATC.
 3. Traffic figures.

1. Safety Data

GPA have received no feedback or complaints from any aviation stakeholders, including the MoD, following the implementation of the RNAV arrival and departure procedures. No Mandatory Occurrence Reports (MOR) have been submitted over the last 7 years associated with the implemented procedures. There have also been no adverse comments from ATC staff in watch logs and no negative feedback at quarterly GPA Flight Ops Committees over the last 7 years.

2. Operational Feedback

Controller feedback has been used to assess operational performance of the airspace change. We recognise that there have likely been staff changes and evolving traffic patterns since implementation (noted above). However, we pertain that operational feedback is still relevant and credible evidence demonstrating long-term suitability of the airspace change.

Glasgow Prestwick Airport Group Supervisors were asked to consult with relevant Air Traffic Control Officers (ATCO) on each of their watches about this airspace change. ATCOs were provided with background information on the ACP and asked to provide feedback responses to the below 5 questions.

Nine responses from individual ATCOs were received who consistently fed back that the procedures functioned as expected. A summary of this feedback - including minor improvement suggestions - has been provided below the associated questions:

1. *Are you aware of, or do you recall, the RNAV departure and arrival procedure changes introduced at Glasgow Prestwick in 2019?*

8 of the 9 respondents answered "yes", with some having been previously involved in procedural training.

2. *From your experience, have these procedures functioned as expected in normal and non-routine operations? e.g. adverse weather cargo heavy periods*

All respondents confirmed that procedures functioned as expected, with no issues experienced.

3. *Have the RNAV procedures had any noticeable impact on controller workload, tactical flexibility, or coordination with adjacent units?*

Respondents confirmed no change or a reduction in workload, for example from a decrease in RT. Two responses noted that coordination could further improve if adjacent units were more familiar with Glasgow Prestwick's waypoint names.

4. *Have you identified any safety, containment or flyability concerns associated with these procedures since implementation?*

8 of the 9 responses reported no issues, procedural consistency was noted. One respondent suggested that the use of SIDs and link routes in one clearance is long winded.

5. *Overall, would you consider the airspace change to have been operationally neutral, beneficial, or problematic?*

1 response was neutral, and the remaining 8 all stated that the airspace change was beneficial. Examples given including offering an alternative approach procedure; and removal of reliance on unreliable ground navigation aids.

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3. Traffic Data

Traffic data has been included to demonstrate that the airspace change has been implemented as intended. By comparing actual 2025 traffic with the forecasts in the ACP, GPA can show that aircraft are routinely flying the new RNAV SIDs (see Figure 1). Trajectory data has also been included in this PIR as it provides operational evidence of how the procedures are now being flown.

GPA Departures – Forecast vs Actuals

As the ACP contained forecasts only for departures, this PIR focuses on these for consistency.

Figure 1 from the ACP includes forecast weekly departures from 2018 through +5 years. This forecast was based on expected traffic growth trends, assuming normal economic conditions and airline schedules. **This ACP did not seek to increase traffic capacity.**

From March 2020, the COVID pandemic significantly affected UK aviation with airports experiencing unprecedented reductions in traffic volumes, including Glasgow Prestwick Airport⁴.

Actual no. departures for 2025 have been appended to the right of Figure 1 for comparison, with arrows depicting an increase/ decrease from the 2023 forecast (closest year). This shows:

- 2025 departures from Runway 12 were slightly higher than expected (*forecast 53/week in 2023 vs. actual 70.1/week in 2025*); and
- 2025 departures from Runway 30 were significantly lower than expected (*forecast 115/week in 2023 vs. actual 26.6/week in 2025*).

The total weekly flights forecast for 2023 was **168**. The actual number of weekly flights in 2025 was **97**. Given the original forecasts were based on pre-COVID assumptions about demand, fleet mix and growth trends, they should therefore be treated with caution.

	Route	2018	2019 (+24%)	2020 (+8%)	2021 (+3%)	2022 (+2%)	2023 (+3%)	2025 Actual Totals
Runway 12	South-west Deps	10	13	14	14	14	15	19 ↑
	West Deps	3	3	3	3	3	4	4
	East/ South-east Deps	23	29	31	32	33	34	47 ↑
	Total Flights	36	45	48	49	50	53	70 ↑
Runway 30	South-west Deps	18	22	24	25	25	26	10 ↓
	West Deps	5	7	7	7	7	8	6 ↓
	South-east Deps	52	65	70	72	74	76	10 ↓
	East Deps	3	4	4	4	5	5	-
	Total Flights	78	98	105	108	111	115	27 ↓
Runway 21	Runway 21 Flights	<1	<1	<1	<1	<1	<1	
Totals		114	143	153	157	161	168	97

Figure 15: GPA ACP: weekly forecast route usage

⁴ Impact of COVID

The COVID pandemic resulted in structural changes across the aviation market. For GPA, airline operations reduced significantly with some ceasing entirely. This resulted in grounded fleets or drastically reduced schedules as passenger revenue is airline’s primary income stream. This reduction in passenger movements created surplus cargo capacity. Therefore, airlines and logistics companies operating from Glasgow Prestwick Airport shifted to cargo/ freight operations and maintenance flights. Glasgow Prestwick Airport has long runways, low congestion and H24 operations; these conditions it ideal for large freighters delivering cargo such as essential medical equipment. These aircraft often require longer take-off runs and likely to preference Runway 12 for performance reasons such as available length and obstacle clearance.

⁵ In 2024, GPA completed a prescribed Runway Designator Change process to reflect updated magnetic variation. As a result, Runway 03/21 was redesignated as Runway 02/20. Any references within this PIR to the former “Runway 21” relate to data or material produced prior to this mandatory redesignation and should now be understood as “Runway 20”.

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Summary of traffic forecasts vs actual traffic: overall 2025 departures remain broadly at 2019 (pre-COVID) levels. However, there has been a shift in runway usage, with a higher proportion of departures using Runway 12 and fewer using Runway 30.

GPA Trajectories

Figure 2 shows actual departure trajectories from August 2025, with the published SID procedures overlaid. This radar plot exhibits effective lateral track keeping of the RNAV SIDs, demonstrating long-term stability and success of the ACP.

A small amount of additional dispersion is visible, which is consistent with tactical vectoring undertaken by controllers to manage traffic, accommodate weather, or ensure safe spacing. This pattern is expected and demonstrates that the procedures are both accurate and flexible – supporting routine tactical interventions while still delivering the intended track-keeping benefits.



Figure 2: GPA Departures, August 2025, alongside published SIDs

- i) GPA must collate related stakeholder observations (enquiry/ complaint data) and submit it to the CAA.
Any location/ area from where more than 10 individuals have made enquiries/ complaints must be plotted on separate maps displaying a representative sample of aircraft track data plots and traffic density plots. The plots should include a typical days-worth of movements from the last month of each standard calendar quarter (March, June, September, December) from each of the years directly preceding and following implementation of the airspace change proposal.

There were no enquiries or complaints relating to this airspace change received.

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For CAA use only

In providing a response for each general observation, please ensure that the 'status' column is completed using the following options and that they are colour coded accordingly:

YES • NO • PARTIALLY • N/A

A summary of any issues arising should be provided against each question in the appropriate text box.

General Observations	Status
a) Has the change sponsor indicated that the original proposal met the intended objectives as described on the CAA's decision to approve the change?	YES
<p>Although the sponsor's submission on this point was brief, they have confirmed that the airspace change has satisfactorily delivered on the following key points:</p> <ul style="list-style-type: none"> • <i>RNAV replication of four existing conventional Standard Instrument Departures (SID).</i> • <i>Introduction of three new RNAV SIDs: one to the east and two to the west.</i> • <i>Five new RNAV approach transitions.</i> • <i>T-Bar approaches to 3 runway ends.</i> 	
b) Has the change sponsor indicated that the original proposal met any conditions described on the CAA's decision to approve the change (if applicable)?	N/A
The CAA did not set any Conditions for this ACP	
c) Did the implementation occur on the date(s) identified in the Decision Letter?	Partially
<p>Although the CAA did not stipulate a particular AIRAC for implementation in its Decision Letter of 29 Nov 2018, most GPA procedures were implemented the following February. However, it was identified that to satisfy Containment compliance, some approach Transitions had to be withdrawn and then redesigned. Working with its procedure designer, GPA resubmitted later that year and the CAA IFP Team approved the new designs, which were implemented in December at AIRAC 13/2019.</p>	

General Observations	Status
d) Was there a significant delay between the planned and actual implementation date?	No
<p>The detail in box c), above provides information on why the implementation of procedures was staggered, but the delay was not considered as being significant.</p>	



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e) Has there been any other issues of significance that occurred during the period 12 months after date of implementation?	No
There were no significant issues.	
f) Other than normal promulgation activity (e.g. NOTAM, AIC etc.), were there any steps undertaken to notify local aviation stakeholders that the airspace change was about to be implemented?	No
Normal promulgation activity was considered acceptable and satisfactorily notified all affected stakeholders	
g) Were there any feedback/complaints received from stakeholders, aviation stakeholders or the Ministry of Defence by the change sponsor in the period between implementation and post-implementation review?	No
No feedback or complaints were received from any aviation stakeholders.	

Other information of relevance (if appropriate)	Status
h) GPA provided detailed quantitative and qualitative information to support their PIR and confirm that it has delivered as intended	YES
<p>From a safety perspective, 7 years of data confirmed that there were no occurrences or concerns of anything safety related.</p> <p>The GPA operational feedback from their controllers did not raise any areas of concern.</p> <p>The traffic data figures provided show that when taking the Global Covid Pandemic into consideration, GPA has recovered reasonably well and their statistics are aligned closely to the figures back in 2019, pre-Covid. This is encouraging as it is a recovery that has not been released in many places elsewhere. Figure 2 also shows that the new routes are being flown as designed.</p>	
i) Post-implementation Stakeholder engagement/observations	No
<p>Although there were no post-implementation Conditions set by the CAA in the Decision Letter, GPA were instructed to collate and analyse any location or area where there were more than 10 separate enquiries or complaints. GPA confirmed that there were no enquiries or complaints relating to this airspace change received</p>	

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General Summary and recommendation	
Based on the above, does the CAA Project Officer recommend that this concludes the PIR assessment for this ACP?	YES
<p>Implementation of procedures was protracted due to a fundamental design fault on the approach transitions that was picked up late in the approval process and should have been identified earlier. However, once the new RNAV procedures had all been implemented and had time to bed-in, the operational benefits were realised and can be seen at Figure 2 in GPA Trajectories, para h), in the Sponsors Other Information of Relevance section. GPA has provided considerable and detailed information to reinforce the point that they believe that the airspace change has delivered exactly as expected. Indeed, following on from the Covid impact, GPA has recovered well, and their traffic figures quickly returned to those of 2019. It is encouraging to note, that the new procedures are being flown as designed and that the opportunity to use the more expeditious and efficient routing for runway 12 is now being realised. Although there is evidence that tactical vectoring is still used on occasion, this is to be expected due to weather and when required, to satisfactorily maintain safe spacing and tighten patterns when the opportunity is available.</p> <p>Overall, the evidence shows that this airspace change proposal and the introduction of the new RNAV procedures has delivered exactly as intended. The initial delay and protracted implementation were not exclusively due to the sponsor or its APDO, and was just a slight interruption in the establishment of a successful airspace project. Taking everything into consideration, GPA and the airline operators have clearly benefitted from the establishment of the new procedures and I therefore recommend that this PIR is approved.</p>	

Decision and Sign Off	
Based on the above, does the Decision Maker conclude that the PIR assessment for this ACP complete?	YES
<p>I concur that this ACP has met its objectives as approved, and the airspace change is confirmed.</p>	
<p>Signed: </p> <p>Name: </p> <p>Principal Airspace Regulator</p>	
Date: 5/5/2026	