

Glasgow Prestwick Airport, Airspace Change Consultation

Stakeholder Feedback Report

13 October 2017 (Draft 3)

1. INTRODUCTION

The following report summarises the Glasgow Prestwick Airport (GPA) Airspace Change consultation which ran from 14 June to 13 September 2017 (13 weeks).

The consultation:

- Provided background information on plans to replace/remove navigational aids as part of a national upgrade programme.
- Outlined GPA's proposals for airspace management procedures using the new equipment - this highlighting preferred departure/arrival routes and the rationale for these including, where appropriate, comparison with other options considered.
- Sought feedback on the proposals from the local communities and other stakeholders.

The full consultation document is available from the GPA website at

<http://www.glasgowprestwick.com/corporate/airspace-change-consultation/>

The guiding principles in developing the proposals are:

- To use this opportunity to identify if there are any improvements that can be made to how GPA uses its airspace to make it as efficient and environmentally-friendly as possible while minimising noise impact for communities.
- To place the proposed flight paths as close to today's flight paths, or away from more populated areas wherever possible.

The feedback has been reviewed and has been considered as part of the process to finalise technical designs (see Section 5 - Conclusions).

Later this autumn, proposals will be submitted to the Civil Aviation Authority (CAA). The CAA will review these in early 2018 over a four month period and will provide a decision. If successful, GPA expects changes to be implemented by summer 2018.

2. CONSULTATION ACTIVITIES

2.1 Planning

GPA appointed NATS, the UK's leading provider of air traffic control services, to assist in developing its Airspace Change proposal. NATS appointed Big Partnership, one of the UK's leading independent communication consultancies, to support the consultation element of the proposals.

The consultation process was presented by GPA/NATS to the CAA as part of a Framework Briefing (17 Feb 2017) and was endorsed by the CAA.

The proposals presented to the CAA were implemented in full (see section 2.3). Additional activities undertaken are also highlighted.

2.2 Supporting materials

Various materials were produced to support the consultation process, these included:

-  A website – as part of GPA's main site
www.glasgowprestwick.com/corporate/airspace-change-consultation/airspace-change-process/
- Sections included:
 - Overview of airspace change process
 - Routes summary
 - Routes – departures and arrivals
 - Consultation timeline
 - Consultation materials (links)
 - FAQs
 - How to give feedback
-  Feedback form (online and print version) – with options to comment on every departure and arrival route proposal – see appendix A
-  Summary leaflet – see appendix B
-  Exhibition panels – see appendix C
-  Table summarising towns and villages near each flightpath – see appendix D
-  Media releases – see Appendix E
-  Advertising – See Appendix F
-  High resolution images document
-  List of aviation stakeholders document See Appendix G.

2.3 Implementation

The following stakeholder engagement was undertaken as part of the consultation:

Date	Audience	Activity
2017		
7 Feb	CAA, other airports	AOA (Airport Operators Association) Consultation Challenges Workshop - NATS and BIG attended, reviewed and updated proposals based on event
17 Feb	CAA	CAA Framework Briefing – covered consultation element. NB Consultation proposals subsequently approved by CAA

Date	Audience	Activity
2 Jun	MSPs/MPs	Briefing offered to all local MSPs/MPs – four accepted and two attended, materials were sent to those that did not attend.
9 Jun	GPA Consultative Committee	Briefing re consultation NB Incorporates key external stakeholders
14 Jun	All	Public consultation start
14 Jun	All	Airspace Change microsite launched as part of GPA website. Full consultation document and feedback form (electronic and print versions) published on website (copies also issued to all public libraries in region)
14 Jun	All	Press release issued – covered by three local media groups and radio. See Appendix E
14 Jun	All	Advertising (promoting consultation, website and exhibitions) placed in all three media groups. See Appendix F
14 Jun	All	Full consultation document and feedback forms (print version) were issued to all public libraries in: <ul style="list-style-type: none"> - North Ayrshire (9) - East Ayrshire (12) - South Ayrshire (9)
22 Jun	MSPs, Councillors, Community Councils	Preview of exhibition at Glasgow Prestwick Airport.
22 Jun	All	Public exhibition at Glasgow Prestwick Airport (10am to 7pm) 1 of 3
23 Jun	GPA Employees	Briefing for all staff.
27 Jun	All	Public Exhibition at Kilmarnock Grand Hall (10am to 7pm) 2 of 3
5 Jul	All	Public Exhibition at Coylton Parish Church (10am to 7pm) 3 of 3
5 Jul	All	Letter and consultation document issued to stakeholder database by post and/or email.
	All	Press release (reminding public of consultation close date) issued to and covered by local media (see Appendix E)
6 Sep	All	Letter (reminding public of consultation close date) issued to stakeholder database by post and/or email.
13 Sep	All	Consultation closed

NB All activities were delivered by GPA staff and supported by NATS and Big Partnership.

3. ENGAGEMENT OVERVIEW

3.1 Respondents

29 formal responses to the consultation were received.

The following 18 respondents completed all or part of the online response form (listed in date order of submission):

- 1 Resident (Troon)
- 2 Resident (Dundonald)
- 3 Resident (KA9)
- 4 South Ayrshire Council (Cllr)*
- 5 South Ayrshire Council (Cllr)*
- 6 South Ayrshire Council (Cllr)*
- 7 South Ayrshire Council (Cllr)*
- 8 South Ayrshire Council*
- 9 South Ayrshire Council*
- 10 Resident (Prestwick)
- 11 Resident (Kilmarnock)
- 12 Resident (KA9)
- 13 Resident (KA21)
- 14 Resident (Troon)
- 15 Resident (Monkton)
- 16 Resident (Inverness)
- 17 British Gliding Association
- 18a Glasgow Airport – (supplied letter, see below).

*input from hard copies completed at the exhibition preview.

In addition the following written responses were provided by the following stakeholder organisations:

- 18b Glasgow Airport (letter - see 18a above)
- 19 The Honourable Company of Air Pilots (email)
- 20 MOD (letter)
- 21 British Horse Society (letter)
- 22 Scottish Natural Heritage (letter)
- 23 NATS (letter)
- 24 The Guild of Air Traffic Control Officers (letter, received after the consultation deadline).

Responses were also provided by the following

- 25 Cargolux
- 26 Air France
- 27 Prestwick Flight Centre
- 28 Ryanair
- 29 Bristow Group

3.2 Exhibition attendance

Originally, one exhibition was planned. It was decided to arrange three to increase opportunities for local people to attend, particularly in local communities that might perceive they were being impacted.

The following numbers attended the three exhibitions:

 Glasgow Prestwick Airport - 42

 Kilmarnock - 16

 Coylton – 7

Total = 65

Each exhibition was manned by senior staff from GPA, NATS and BIG.

3.3 Stakeholder letters

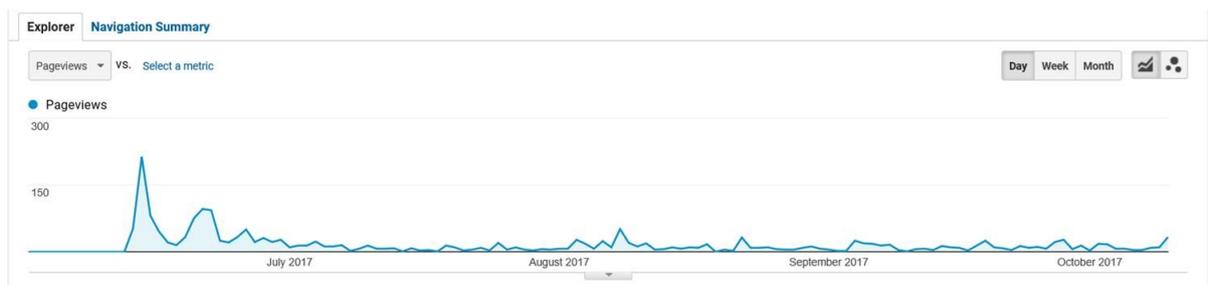
A stakeholder database of organisations/representative bodies that might be interested in the consultation was researched and compiled with input from GPA, NATS and BIG.

This included 254 representatives from 169 organisations – see appendix G.

All contacts were issued (from 14 Jun) with a letter or email and a copy of and/or link to the consultation document.

A reminder letter/email was issued (6 Sep) to encourage stakeholders to respond and to remind them of the consultation close date.

3.4 Google Analytics



During the period 14 June to 11 October, the Airspace Consultation pages views totalled 2,032 (1,660 unique page views). Average viewing time was 1 min 49 sec. NB this does not include time taken to complete the response form (see enlarged version on next page)

Explorer

Navigation Summary

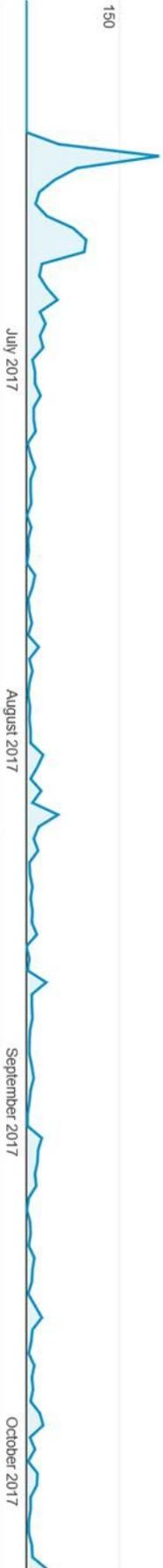
Pageviews ▾

VS. Select a metric

● Pageviews

300

150



Day

Week

Month



4. SURVEY RESPONSES

4.1 Summary

Of the 18 respondents that completed the online survey, the feedback was supportive of the proposals with some undecided:

- Ten respondents agreed with all preferred routes (Ref 2, 3, 4, 6, 7, 8, 9, 10, 12, 14)
- Two respondents agreed with all preferred routes they chose to comment on (Ref 11, 15)
- One respondent agreed with all preferred routes but was undecided on 3 routes (Ref 5)
- Three respondents skipped all questions related to routes (Ref 1, 16, 18)
- One respondent was undecided on all routes (Ref 17)

Only one online survey included opposition to part of the proposals:

- One respondent was opposed to three routes on the basis of noise (Ref 13).

4.2 Overview of individual responses

While significant effort was made to increase awareness and encourage responses, there was a relatively low response rate.

This allows us to provide an overview of all 29 formal responses and how relevant feedback was addressed – given the number involved, we believe this is more meaningful than statistical analysis.

NB Respondents are named where they are representing an organisations. Members of the public have been anonymised.

Ref	Respondent	Feedback	Response by GPA to feedback
Responded by survey			
1	Resident (KA10 - Troon)	Respondent skipped all Qs related to routes	Thanked for response.
2	Resident (Dundonald)	Respondent agreed with all preferred routes.	Thanked for response.
3	Resident (KA9)	Respondent agreed with all preferred routes.	Thanked for response.
4	South Ayrshire Council Cllr Derek McCabe	Respondent agreed with all preferred routes.	Thanked for response.
5	South Ayrshire Council Cllr Peter Henderson Portfolio Holder	Respondent agreed with most preferred routes, but was undecided on R30 (West) and R12 (west and East) departure routes, and R30 East/R21 East arrivals – but no further correspondence was received.	Thanked for response.
6	South Ayrshire Council Cllr Arthur Spurling	Respondent agreed with all preferred routes.	Thanked for response.

7	South Ayrshire Council Cllr Lee Lyons	Respondent agreed with all preferred routes.	Thanked for response.
8	South Ayrshire Council Cllr Martin Dowey	Respondent agreed with all preferred routes.	Thanked for response.
9	South Ayrshire Council Cllr Iain Campbell	Respondent agreed with all preferred routes.	Thanked for response.
10	Resident (KA9 - Prestwick)	Respondent agreed with all preferred routes.	Thanked for response.
11	Resident (KA3 - Kilmarnock)	Respondent agreed with all preferred routes other than Runway 30 Arrivals south which they did not wish to comment on.	Thanked for response.
12	Resident (KA9)	Respondent agreed with all preferred routes.	Thanked for response. Response did not lead to changes to proposals.
13	Resident (KA21)	<p>Respondent commented on the following preferred routes</p> <ul style="list-style-type: none"> - R30 Departure West At times the volume of arriving and departing aircraft is already very loud in Saltcoats never mind directly flying over the 3 towns! (NB No alternative preferred route identified). - R12 Departure West, At times the volume of arriving and departing planes is loud enough without directly flying over the 3 towns. (NB No alternative preferred route identified). - R12 Approach We already hear planes arriving and departing from Saltcoats to have them approach overhead is not acceptable just so they avoid Troon! (NB No alternative preferred route identified). <p>Respondent did not comment on other routes.</p>	Thanked for response. Reply is included in Appendix H.
14	Resident (Troon)	Respondent agreed with all preferred routes.	Thanked for response.
15	Resident (Monkton)	Respondent agreed with preferred routes, apart from	Thanked for response.

		<p>skipping answers to the following:</p> <ul style="list-style-type: none"> - Arrivals Runway 21 – South - Runway 30 - Approach - Runway 12 - Approach - Runway 21 - Approach 	
16	Resident (Inverness)	Respondent skipped all questions.	Thanked for response.
17	British Gliding Association Airspace Representative - Scotland	<p>The respondent indicated they are undecided on all these routes and referred to the following general comment in all answers:</p> <p>The BGA has a general comment that newly created arrival and departure routes should be as steep as reasonably practical so as to minimise the footprint of controlled airspace required, thus minimising the impact on general aviation and in particular gliding, for whose pilots Class D airspace realistically presents a no-go area. It is appreciated that this consultation is not proposing controlled airspace boundary changes but if the new routes are as steep as possible this may be a future possibility.</p>	Thanked for response. Reply is included in Appendix H.
Responded by letter/email			
18	Glasgow Airport Head of Airside	<p>Feedback was provided by letter (11 Sep 2017) – this is reprinted in Appendix H.</p> <p>Most routes were noted as not affecting Glasgow.</p> <p>Comments were provided on:</p> <ul style="list-style-type: none"> - Runway 12 Departures to the east – alternative routes would not be supported - Runway 21 Arrivals from south and east - supported, subject to formalised ATC procedures and usage volume - Runway 30 and 12 Approaches – subject to current procedures for interaction remaining - Runway 21 approaches – GA highlighted a preference for Alternative 1 to reduce 	Thanked for response. Reply is included in Appendix H.

		likelihood of interaction with Glasgow air traffic.	
19	<p>The Honourable Company of Air Pilots</p> <p>Director of Aviation Affairs The Honourable Company of Air Pilots</p>	<p>Feedback was provided by email (6 Aug 2017)</p> <p>This stated: "I can confirm that we have no objection to your proposals."</p>	General response appreciating the feedback.
20	<p>MOD</p> <p>Squadron Leader, SO2 Airspace Strategy</p>	<p>Feedback was provided by letter (5 Sep 2017) – this is reprinted in Appendix H.</p> <p>This indicated "The MoD have no comments or objections however, would wish to be re-engaged should aspects of the proposal change."</p>	General response appreciating the feedback.
21	<p>British Horse Society,</p> <p>Scotland Manager</p>	<p>Feedback was received by letter attached to a response form (NB no route questions were answered).</p> <p>The letter is reprinted in Appendix H.</p> <p>In general, BHS highlighted concerns re a lack of one-to-one consultation with owners of horses.</p>	<p>A letter responding to each point was provided – this is reprinted in Appendix H.</p> <p>This emphasised the efforts made to promote the consultation to general public and a willingness to consider comments from anyone, including horse owners.</p> <p>The deadline for response was extended from 13 Sep to 22 Sept (no further correspondence was received).</p>
22	<p>Scottish Natural Heritage,</p> <p>Area Officer Ayrshire and Arran</p>	<p>Feedback was provided by letter (21 Jul 2017) – this is reprinted in Appendix H. This stated:</p> <p>"I can confirm that the proposed changes will have no significant impacts on any specially protected sites or species."</p>	General response appreciating the feedback.
23	<p>NATS</p> <p>General Manager Future ATM & Policy</p>	<p>Feedback was provided by letter (14 Sep 2017) – this is reprinted as Appendix H.</p> <p>This confirmed full support for the procedure design options subject to GPA addressing comments regarding potential impacts on the NATS operation.</p>	<p>Thanked for response.</p> <p>Reply is included in Appendix H.</p>

24	The Guild of Air Traffic Control Officers Manager Technical and Operations	Feedback was provided by letter (21 Sep 2017) – this is reprinted in Appendix H. The letter noted “we are in favour of the proposed departure and arrival routes and procedures at Glasgow Prestwick, with the caveats outlined”. The two caveats were: - Looking at the departures routes proposed for runway 12 to the Southwest and to the West (figures 37 and 42, respectively), it would appear that an area to the inside of Alternative 2 in both cases has not been considered for the placement of both departure routes, even though they would appear to affect even less people on the ground. We understand that Alternative 2 would not give the predictability sought since the turn is based on reaching a specific altitude but other restrictions could still be used so that the turn happens at the same point. Are there any other reasons that explain not considering the area inside Alternative 2? - In addition and from a general point of view, in order to provide a safe ATC service, it must be ensured that proper training and adequate staffing are provided whenever changes are introduced.	A letter responding to each point was provided. In summary, this highlighted requirements to: - replicate current routes as closely as possible. - ease the overflight impact on the community of Drongan without trying to impact new populations - meet stated design principles. - avoid negative impacts on communities created by alternative proposal. Reply included in Appendix H.
Airline responses			
25	Cargolux		Reply included in Appendix H.
26	Air France	No issues raised	Thanked for response
27	Prestwick Flight Centre	No issues raised	Thanked for response
28	Ryanair	Query on missed approach procedures.	Thanked for response. Reply provided.
29	Bristow Group	No issued raised.	Thanked for response

4.3 Other themes

No feedback was provided that highlighted concerns re:

- Impact on local communities, such as urban development.
- Property issues, such as impacts on property values.
- Environmental impacts, such as carbon emissions and pollution (NB acknowledging one respondent's concern re noise).
- Health and wellbeing e.g. disturbed sleep (NB acknowledging one respondent's concern re noise).
- Operational impacts, such as flight planning.
- Timing of flights, such as night flights.

4.4 Quality of the consultation

In addition to feedback on the proposed routes, feedback on the quality of the consultation was sought.

How did you hear about this consultation? (14 responses)

- Local media (1)
- Online (4)
- Other (9)

Did you review the consultation document? (14 responses)

- Yes (13)
- No (1)

Did you find the consultation document...? (13 responses)

- Very good (7)
- Good (5)
- Average (1)
- Poor (0)
- Very poor (0)

Did you visit the consultation website...? (14 responses)

- Yes (8)
- No (6) NB 6 responses were input from questionnaires completed at exhibition preview.

Did you find the consultation website...? (8 responses)

- Very good (4)
- Good (3)
- Average (1)
- Poor (0)
- Very poor (0)

Please indicate if you visited one or more of our exhibitions. (11 responses)

- GPA (10)
- Kilmarnock (1)

Did you find the exhibition...? (11 responses)

- Very good (9)
- Good (2)
- Average (0)
- Poor (0)
- Very poor (0)

Did you contact Glasgow Prestwick Airport staff or representatives regarding the consultation (e.g. by email/at the exhibition(s))?

- Yes (6)
- No (8)

If you made contact, how effective/helpful was our response? (6 responses)

- Very good (5)
- Good (1)
- Average (0)
- Poor (0)
- Very poor (0)

Do you have any other comments on the consultation process? (4 responses)

(6) South Ayrshire Council, Cllr Arthur Spurling

The whole exercise was very informative and will allow Councillor's to make an informed opinion.
Many Thanks

(9) South Ayrshire Council - Cllr Iain Campbell

I hope you involve local schools as these are the future for local resources and opportunity, in the meantime, more airlines and internal routes, Western Isles??

(10) Resident – postcode KA9 / Prestwick

Prestwick airport is unique in the UK -Local residents love it, want it to thrive and want to have a reason to spend time I it. It's walking distance to the town, although along a busy road. Creation of a community woodland/amenity space would further connect the airport to the community and to the people. The people who work in and around the airport would benefit from this too. I know the local MP has made an approach to the airport and neighbouring business. I hope we can deliver this.
Good luck! For everything

(17) British Gliding Association

Whilst the purpose of this consultation it not to propose any change to controlled airspace, it does not mention nor take account of general aviation and in particular gliding activities in the area around Prestwick that are not actually operating to/from the airport

In the BGA's opinion, the volume of Commercial Air Transport traffic using Prestwick airport does not justify the swathe of Class D airspace it has, which in practice is demonstrably a "no go" area for glider pilots. Class E with RMZ or electronic conspicuity would be proportionate and allow the same level of safety for CAT traffic whilst allowing fairer sharing of the of the airspace.

5. CONCLUSIONS AND NEXT STEPS

We made significant efforts to encourage responses. These efforts included local publicity such as newspapers, radio, social media, and roadshow events.

We wrote to all the identified stakeholders twice. We took all the responses and considered the benefits and impacts of each.

We replied to all our stakeholders, explaining the rationale for the decisions we made (see Appendix H). NATS Prestwick Control Centre is one of those stakeholders. GPA and NATS have been working together, because our proposed airspace design needs to link into their air route network as efficiently as possible.

We agreed with NATS that some of our departure routes can be redefined, so that NATS “owns” the routes slightly earlier than described in the consultation – this is known as truncation-replication. Doing this does not change the proposed flightpaths (laterally or vertically), but provides NATS with more flexibility for the aircraft’s next phase of flight.

We believe the consulted-upon designs are the best balance of benefits and impacts. The next step is for us to submit an Airspace Change Proposal (ACP) to the CAA. This package of documents and data will be our formal request to make the changes we described in our consultation material.

The CAA will study the ACP and will decide if it has merit. If the CAA approves our proposal, the earliest possible implementation date is 24th May 2018. We will update our website with progress on the ACP, please see www.glasgowprestwick.com/corporate/airspace-change-consultation

APPENDICES

APPENDIX A - FEEDBACK FORM (WORD VERSION)

Glasgow Prestwick Airport Airspace Change Consultation

This feedback form has been designed to enable comments and feedback on the Glasgow Prestwick Airport Airspace Consultation.

This should be read in conjunction with the consultation document available at glasgowprestwick.com/airspace

An online version of this feedback form can also be accessed via the website.

A separate chart is available in our summary leaflet and on our website that indicates towns and villages closest to the routes under review. While this could help identify the routes you wish to comment on, please do review the full consultation document in order to make an informed assessment.

Please return copies of this questionnaire

- airspaceconsultation@glasgowprestwick.com



- Airspace Change Consultation, Glasgow Prestwick Airport, Aviation House, Prestwick, KAG 2PL

The deadline for:

- Online responses is 13th September
- Postal responses is 13th September (postmarked with this date)

For more information visit glasgowprestwick.com/airspace

This document can be provided on tape, braille, large print, and other languages by calling 01292 511 200

The information which you give when completing this form will be used in accordance with the Data protection Act 1998 and for the following purposes: to enable Glasgow Prestwick Airport and its agents to evaluate its airspace change proposals against community feedback and to enable the organisation to identify trends and compile statistics. The information will be kept securely and will be kept no longer than necessary.

Section 1 - Your details

Title* – e.g. Mr, Mrs, Ms	
First name*	
Surname*	
Organisation (if commenting on behalf of/representing)	
Role/title - e.g. Managing Director (if commenting on behalf of/representing)	
Email	
Address	
Postcode*	
Telephone	
Yes/No**	Please notify me by email with information updates regarding this consultation.

*Must be completed for submission to be valid

** Delete as applicable

Section 2 – Your response – Runway 30 Departures

If you require more space, please use the additional comments section on the back page (indicating which routes you are commenting on).

Route Runway 30 Departures	
Details	See consultation document – Sections 6.2 to 6.5
Q1 Southwest	Please print 'YES' in one of the tick boxes
Tick box	I do not wish to comment on these routes
Tick box	I agree with the preferred route
Tick box	I do not agree with the preferred route (please indicate your preference in comments)
Tick box	I am undecided on these routes
Comments (Optional)	
Q2 West	Please print 'YES' in one of the tick boxes
Tick box	I do not wish to comment on these routes
Tick box	I agree with the preferred route
Tick box	I do not agree with the preferred route (please indicate your preference in comments)
Tick box	I am undecided on these routes
Comments (Optional)	
Q3 Southeast	Please print 'YES' in one of the tick boxes
Tick box	I do not wish to comment on these routes
Tick box	I agree with the preferred route
Tick box	I do not agree with the preferred route (please indicate your preference in comments)
Tick box	I am undecided on these routes
Comments (Optional)	
Q4 East	Please print 'YES' in one of the tick boxes
Tick box	I do not wish to comment on this route
Tick box	I agree with the preferred route
Tick box	I do not agree with the preferred route (please indicate your preference in comments)
Tick box	I am undecided on these routes
Comments (Optional)	

Section 2 – Your response – Runway 12 Departures

If you require more space, please use the additional comments section on the back page (indicating which routes you are commenting on).

Route		Runway 12 Departures	
Details	See consultation document – Sections 6.6 to 6.9		
Q5 Southwest	Please print 'YES' in one of the tick boxes		
Tick box	I do not wish to comment on these routes		
Tick box	I agree with the preferred route		
Tick box	I do not agree with the preferred route (please indicate your preference in comments)		
Tick box	I am undecided on these routes		
Comments (Optional)			
Q6 West	Please print 'YES' in one of the tick boxes		
Tick box	I do not wish to comment on these routes		
Tick box	I agree with the preferred route		
Tick box	I do not agree with the preferred route (please indicate your preference in comments)		
Tick box	I am undecided on these routes		
Comments (Optional)			
Q7 Southeast	Please print 'YES' in one of the tick boxes		
Tick box	I do not wish to comment on these routes		
Tick box	I agree with the preferred route		
Tick box	I do not agree with the preferred route (please indicate your preference in comments)		
Tick box	I am undecided on these routes		
Comments (Optional)			
Q8 East	Please print 'YES' in one of the tick boxes		
Tick box	I do not wish to comment on these routes		
Tick box	I agree with the preferred route		
Tick box	I do not agree with the preferred route (please indicate your preference in comments)		
Tick box	I am undecided on these routes		
Comments (Optional)			

Section 2 – Your response - Arrivals

If you require more space, please use the additional comments section on the back page (indicating which routes you are commenting on).

Route Arrivals	
Details	See consultation document pages – Sections 6.10 to 6.14
Please note:	As most of these routes are above 7,000ft until the last few kilometres, the Department for Transport guidance instructs us to prioritise environmental efficiency over noise impact. We have therefore only designed a preferred route which is as direct as possible.
Q9 Runway 30 - South	Please print 'YES' in one of the tick boxes
Tick box	I do not wish to comment on this route
Tick box	I agree with the preferred route
Tick box	I do not agree with the preferred route
Tick box	I am undecided on this route
Comments (Optional)	
Q10 Runway 30 - East	Please print 'YES' in one of the tick boxes
Tick box	I do not wish to comment on this route
Tick box	I agree with the preferred route
Tick box	I do not agree with the preferred route
Tick box	I am undecided on this route
Comments (Optional)	
Q11 Runway 12-South	Please print 'YES' in one of the tick boxes
Tick box	I do not wish to comment on this route
Tick box	I agree with the preferred route
Tick box	I do not agree with the preferred route
Tick box	I am undecided on this route
Comments (Optional)	
Q12 Runway 21-South	Please print 'YES' in one of the tick boxes
Tick box	I do not wish to comment on this route
Tick box	I agree with the preferred route
Tick box	I do not agree with the preferred route
Tick box	I am undecided on this route
Comments (Optional)	
Q13 Runway 21 - East	Please print 'YES' in one of the tick boxes
Tick box	I do not wish to comment on this route
Tick box	I agree with the preferred route
Tick box	I do not agree with the preferred route
Tick box	I am undecided on this route
Comments (Optional)	

Section 2 - Your response - Approaches

If you require more space, please use the additional comments section on the back page (indicating which routes you are commenting on).

Route	Approaches
Details	See consultation document pages – Sections 6.15 to 6.17
Q14 Runway 30 - Approach	Please print 'YES' in one of the tick boxes
Tick box	I do not wish to comment on these routes
Tick box	I agree with the preferred route
Tick box	I do not agree with the preferred route (please indicate your preference in comments)
Tick box	I am undecided on these routes
Comments (Optional)	
Q15 Runway 12 - Approach	Please print 'YES' in one of the tick boxes
Tick box	I do not wish to comment on these routes
Tick box	I agree with the preferred route
Tick box	I do not agree with the preferred route (please indicate your preference in comments)
Tick box	I am undecided on these routes
Comments (Optional)	
Q16 Runway 21 - Approach	Please print 'YES' in one of the tick boxes
Tick box	I do not wish to comment on these routes
Tick box	I agree with the preferred route
Tick box	I do not agree with the preferred route (please indicate your preference in comments)
Tick box	I am undecided on these routes
Comments (Optional)	

Section 3 - Consultation feedback

Although not compulsory to do so, we would be grateful for your feedback on this consultation to help us plan any others we may have in the future. (*delete as applicable)

Q17 How did you hear about this consultation?	
Yes/no*	Advertisement
Yes/no*	Local media
Yes/no*	Friend/family
Yes/no*	Online
Yes/no*	Other – please indicate:
Q18a Did you review the consultation document?	
Yes/no*	
Q18b Did you find the consultation document ...?	
Very good *	
Good	
Average	
Poor	
Very poor	
Q19a Did you visit the consultation website?	
Yes/no*	
Q19b Did you find the consultation website...?	
Very good *	
Good	
Average	
Poor	
Very poor	
Q20a Please indicate if you visited one or more of our exhibitions?	
At Glasgow Prestwick Airport	Yes/no*
At Kilmarnock	Yes/no*
At Coylton	Yes/no*
Q20b Did you find the exhibition?	
Very good *	
Good	
Average	
Poor	
Very poor	
Q21a Did you contact Glasgow Prestwick Airport employees or representatives regarding the consultation (e.g. by email/at the exhibition)?	
Yes/no*	
Q21b If you made contact, how effective/helpful was our response?	
Very good *	
Good	
Average	
Poor	
Very poor	

Section 4 - Additional comments?

Please use this space to include any other comments.

If you are continuing a previous comment, please indicate the route and/or question number.

If you require additional space, please attach A4 sheets of paper.

Comments:

APPENDIX B – SUMMARY LEAFLET

Airspace Change Consultation




Glasgow Prestwick Airport is undergoing an Airspace Change Process.

This is a programme many UK airports are undertaking. It is needed because of the removal of old navigation aids as part of a national replacement programme.

Airports have operated routes based on this old equipment since the mid-1960s and need to update their procedures to be compatible with new, state of the art satellite-based systems.

We are also using this opportunity to see if there are any improvements we can make to how we use our airspace to make it as efficient and environmentally-friendly as possible while minimising noise impact for communities.

We want to know what people think of our proposals.

Glasgow Prestwick Airport Airspace Change Consultation

What is an airspace change?

Our airspace is regulated by the Civil Aviation Authority (CAA) who keep it safe, efficient and cost-effective.

For Glasgow Prestwick Airport, this means the removal of navigation aids at Turnberry and New Galloway.

They will be replaced by modern procedures that use technology on the aircraft and in space to navigate.

The old ground-based navigation aids that assist aircraft to fly in and out of Glasgow Prestwick Airport are due to be taken out of service in 2018.

The Airspace Change Process is a series of steps required by the CAA to update the skies above us. We are working with NATS (the UK's air traffic control company) and their airspace design experts as we change our existing flight procedures ahead of the introduction of the new technology.

The steps are there to ensure all airports follow the same process, and many involve a consultation with the public.

The results from this consultation are then used to inform our final design which will be considered by the CAA for approval. The CAA's decision is based on whether the change is efficient, environmentally-friendly and safe.

At low level (below 4,000ft) this means minimising noise impact on communities, while at higher levels minimising CO2 emissions is the priority.

Example of navigation aid to be decommissioned



2

What routes are being proposed?

Our proposed designs have placed the new flight paths either as close as possible to those being used currently, or away from populated areas where we can.

Glasgow Prestwick Airport offers the widest range of aviation services of all the Scottish airports. We handle passenger, cargo, military, helicopters and light aircraft. Aircraft that come through Prestwick arrive from and depart to destinations all over the world. We need to ensure that our airspace is still able to accommodate these activities.

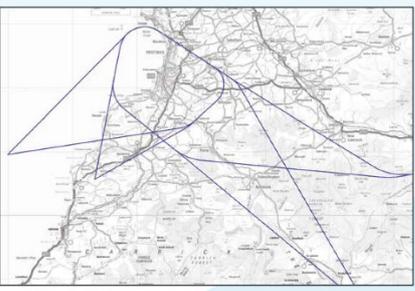


Navigation Aids

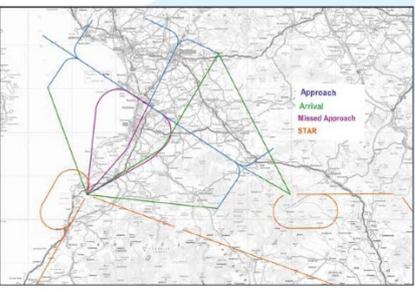
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Glasgow Prestwick Airport Airspace Change Consultation

What routes are being proposed?



Proposed Departure Routes



Proposed Arrival Routes

4

APPENDIX C – EXHIBITION PANELS

What is an airspace change?

Our airspace is regulated by the Civil Aviation Authority (CAA) who keep it safe, efficient and cost-effective. Airspace is broken down into two categories:

Unclassified - where aircraft are free to fly without constraint, of which there are considerable areas across Scotland.

Controlled - a network of corridors and areas with fixed navigation aids acting as markers to ensure safe distances between aircraft.

The changeover from analogue to digital air traffic control is part of a five-year national programme that started in 2014. The navigation aids that enable aircraft to fly in and out of Glasgow Prestwick Airport are due to be replaced by 2025.

For Glasgow Prestwick Airport, this means the removal of navigation aids at Turberville and New Glasgow. They will be replaced by procedures that use technology on the aircraft and in space to replicate.

The Airspace Change Process is a series of steps required by the CAA. The steps are those for new air traffic control procedures, and many involve a consultation with the public. The results from this consultation are then used to inform the final design that will be considered by the CAA for approval.

The CAA's decision is based on whether the change is efficient, environmentally-friendly and safe.

At low level (below 4000ft) it's about minimising noise impact on communities, while at higher levels minimising CO₂ emissions is the priority.

We are working with NATS (the UK's air traffic control company) and their airspace design experts as we change our existing flight procedures ahead of the introduction of the new technology. We are using this opportunity to see if there are any improvements we can make to how we use our airspace to make it safer and more environmentally-friendly as possible.

Our proposed designs have placed the new flight paths either as close as possible to those being used currently, or away from more populated areas where we can.

Because the new designs are largely unchanged, it is likely that most people won't notice any significant change. In fact, one of the main aims for the design team is to limit the number of people being overflown, wherever possible.

If you live directly underneath, or close to, an existing flight path, it's possible you could notice some changes. If you do, we expect these to be very small.

Glasgow Prestwick Airport offers the widest range of aviation services of all the Scottish airports. We handle passenger, cargo, military, helicopter, and light aircraft. Aircraft that come through Prestwick arrive from and depart to destinations all over the world. We need to ensure that our airspace is still able to accommodate these activities.



Location of navigation aids



Example of navigation aid to be decommissioned

Airport runways layout



Departures

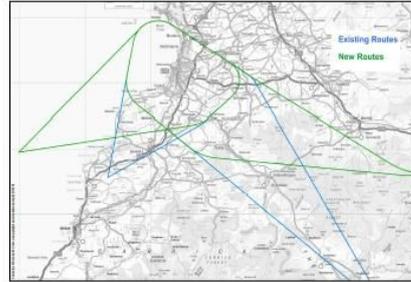
Our current departure routes take aircraft to the Southeast and Southwest, which works well for aircraft bound for destinations such as the UK and central/southern Europe.

Because aircraft travelling to North America, Northern Europe and the Far East have to fly away from their destination before turning back to the west or east, we have proposed two new departure routes from the airport, one taking aircraft west towards Northumberland and the other taking aircraft east towards Europe.

For the departures from runway 30 the current conventional procedures turn to the south at a point approximately 1500 metres from the end of the runway. The current design criteria prohibit the turn point from being defined any closer than 1500 metres from the end of the runway. We have therefore placed the new turn point at this location. The result of this change is that aircraft will

fly over the water and are therefore slightly higher when they cross the noise boundary. It was noted impact on the ground, albeit slightly higher CO₂ emissions.

For the departures from runway 12 the current conventional procedures to the southwest (directly over the Orkney Islands) are proposed to be replaced by a new route to the west and southwest that turns slightly earlier and passes between Orkney and Halloway. This route is approximately 5km shorter than the current route and is aimed at reducing the total number of people exposed to noise on the ground by avoiding the main built-up areas.



Proposed departure routes

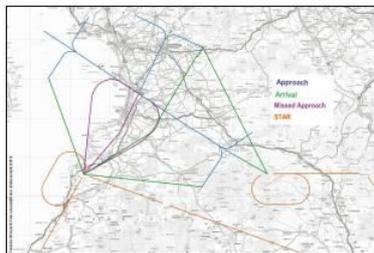
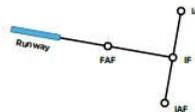
Arrivals

The new arrival flight paths we have designed replicate the existing routes as closely as possible with the addition of modern 'T-Bar' tracks.

These allow aircraft arriving from any direction to fly a stable approach path without having to make any extreme turns.

We are also proposing new arrival routes that take aircraft from the arrival points to the start of an appropriate 'T-Bar' track. These routes are designed to keep aircraft over the water or open countryside as much as possible.

The main points on a T-Bar approach



Proposed arrival routes

Departures

General factors influencing design

For each departure route we have indicated the preferred route and the alternative route evaluated. All routes are designed and evaluated according to the design criteria listed in the consultation document, section 5.1.

Noise analysis is based on the Boeing 737 (the commonest aircraft type operating from Glasgow Prestwick) and the Boeing 747 (the loudest aircraft type typically operating from the airport). While the Boeing 747 footprint is larger, this aircraft type only makes up approximately 2% of the aircraft movements.

Concentration vs. dispersal

Moving to more accurate modern forms of navigation usually has the effect of concentrating flights along a small area each side of the route centreline, reducing the total number of people affected. Certain methods can be used to disperse traffic over a wider area, such as requiring aircraft to turn when they reach a certain altitude. This results in a much larger area being subject to aircraft noise, but on a less frequent basis. This may be preferable if a concentrated route would overly a particular community as a dispersed route can spread the noise impact over a wider of countryside. The differences in the noise, altitude, and bank angle of each individual aircraft mean there will always be a certain amount of dispersal.

'Fly-by' vs 'fly-over'

Each route has a number of turn points. The type of turn specified in relation to these points will influence dispersal. 'Fly-by' turns are where the aircraft will calculate where it needs to start banking in order to smoothly intercept the next segment of the route, and will 'fly-by' the navigation point. For these turns there will be a limited amount of dispersal around the inside of the turn. 'Fly-over' turns are where the aircraft fly all the way to the turn point before starting to turn. These turns result in a larger amount of dispersal around the outside of the turn.



Runway 30 - departures

The current departure routes from runway 30 fly straight ahead for approximately 1500 metres before turning to the southwest over the Firth of Clyde. The current design criteria prohibit the turn point from being defined any closer than 1500 metres from the end of the runway.

This table shows anticipated aircraft departures from runway 30

Anticipated aircraft movements per hour per day	2018	2019	2020	2021	2022	2023
Southwest	18	22	24	25	25	26
West	5	7	7	7	7	8
Southwest	52	66	70	72	74	76
East	3	4	4	4	5	5

Note: Further information on runway 30 departures is provided in the consultation document, section 5.2 & 5.5



Runway 12 - departures

The current departure routes from runway 12 fly over or close to several villages. As part of the redesign project, we explored options to minimise the noise impact on these communities.

This table shows anticipated aircraft departures from runway 12

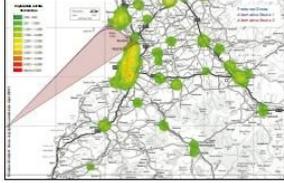
Anticipated aircraft movements per hour per day	2018	2019	2020	2021	2022	2023
Southwest	10	13	14	14	14	15
West	3	3	3	3	3	4
Southwest	21	27	29	30	31	32
East	2	2	2	2	2	2

Note: Further information on runway 12 departures is provided in the consultation document, section 5.6 & 5.6.4



Runway 30 – departures to the west

This is a new route intended to provide a more efficient route for aircraft departing to destinations such as Iceland, North America, or South America.



Runway 30 departures to the west – preferred and alternative routes over population density maps

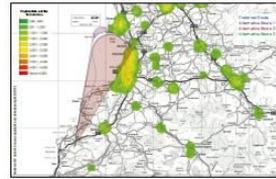
- Preferred** – Departures from runway 30 currently fly straight ahead for approximately 1500 metres before turning to the southeast over the Ribs of Clyde. The current design criteria prohibit the turn point from being defined any closer than 1500 metres from the end of the runway. This slight extension to the straight flight has a small noise impact on the town of Troon. The preferred route then turns to the southeast and then over the Ribs to connect to a point called HSDON on the airway leading to the Atlantic.
- Alternative 1** – We considered designing the route using a “fly-by” turn rather than a “fly-over” turn. The preferred route uses a “fly-over” turn to ensure that all aircraft start their turn at the defined point. Fly-by turns use the standard turn type for the routes as they allow aircraft to turn from one track onto another smoothly using the most appropriate turn radius for the aircraft. However, the turn point has to be placed at a sufficient distance to ensure the fastest aircraft doesn’t start turning before 1500 metres from the end of the runway. This will result in more aircraft continuing to fly over the water until 1500 metres before starting their turn to the southwest.
- Alternative 2** – We considered specifying the initial turn to the south based on a specified altitude above the ground. This has the environmental advantage of ensuring aircraft turn as soon as they reach a safe altitude. However, it also causes significant dispersion of the traffic as lighter aircraft that climb and will turn much earlier while heavier aircraft will take a lot longer (and travel further) to reach the same altitude and will therefore turn later. This dispersion makes it very difficult for air traffic control to integrate the traffic together and ensure aircraft separation.

This table compares the impact of each route

	Preferred	Alt. 1	Alt. 2
CO ₂ emissions	Low	Low	Variable
Noise – Population Overhead	Low	Low	Low
Noise – New Population	0	0	Low
Concentration / Dispersion	Concentration	Concentration	Dispersion
Technical Feasibility	Good	Good	Difficult
Community	Impact (compared to current day)		
Troon	Closer	Closer	Closer
Dunoon	Further	Further	Further
Apr	Same	Same	Partially Overhead

Runway 30 – departures to the southwest

This is a replacement for the existing “RIBS” departure route



Runway 30 departures to the southwest – preferred and alternative routes over population density maps

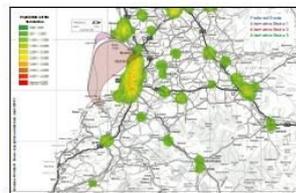
- Preferred** – Departures from runway 30 currently fly straight ahead for approximately 1500 metres before turning to the southwest over the Ribs of Clyde. The current design criteria prohibit the turn point from being defined any closer than 1500 metres from the end of the runway. This slight extension to the straight flight has a small noise impact on the town of Troon. The preferred route then turns to the south and then over the Ribs before turning to the southwest and connecting to a point overhead the old Turnberry (RIBS) navigation aid.
- Alternative 1** – We considered designing the route using a “fly-by” turn rather than a “fly-over” turn. The preferred route uses a “fly-over” turn to ensure that all aircraft start their turn at the defined point. Fly-by turns use the standard turn type for the routes as they allow aircraft to turn from one track onto another smoothly using the most appropriate turn radius for the aircraft. However, the turn point has to be placed at a sufficient distance to ensure the fastest aircraft doesn’t start turning before 1500 metres from the end of the runway. This will result in more aircraft continuing to fly straight ahead to Troon before starting their turn to the southwest.
- Alternative 2** – We considered specifying the initial turn to the southwest on a specified altitude above the ground. This has the environmental advantage of ensuring aircraft turn as soon as they reach a safe altitude. However, it also causes significant dispersion of the traffic as lighter aircraft that climb will turn much earlier while heavier aircraft will take a lot longer (and travel further) to reach the same altitude and will therefore turn later. This dispersion makes it very difficult for air traffic control to integrate the traffic together and ensure aircraft separation.
- Alternative 3** – We considered designing a route that connects with the design criteria for the initial turn then brings aircraft back to the current conventional route. This would have the same impact on Troon as the preferred route and would result in slightly increased back-traffic / slightly increased CO₂ emissions.

This table compares the impact of each route

	Preferred	Alt. 1	Alt. 2	Alt. 3
CO ₂ emissions	Low	Low	Variable	Low
Noise – Population Overhead	Low	Low	Low	Low
Noise – New Population	0	0	Low	0
Concentration / Dispersion	Concentration	Concentration	Dispersion	Concentration
Technical Feasibility	Good	Good	Difficult	Good
Community	Impact (compared to current day)			
Troon	Closer	Closer	Closer	Closer
Dunoon	Similar	Similar	Similar	Similar
Apr	Same	Same	Partially Overhead	Same

Runway 30 – departures to the southeast

This is a replacement for the existing “RIBS” departure route.



Runway 30 departures to the southeast – preferred and alternative routes over population density maps

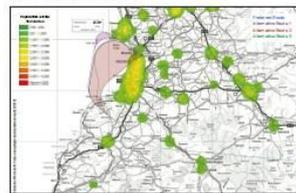
- Preferred** – Departures from runway 30 currently fly straight ahead for approximately 1500 metres before turning to the southeast over the Ribs of Clyde. The current design criteria prohibit the turn point from being defined any closer than 1500 metres from the end of the runway. This slight extension to the straight flight has a small noise impact on the town of Troon. The preferred route then turns to the south and then over the Ribs before turning to the southeast and connecting to a point overhead the old Turnberry (RIBS) navigation aid.
- Alternative 1** – We considered designing the route using a “fly-by” turn rather than a “fly-over” turn. The preferred route uses a “fly-over” turn to ensure that all aircraft start their turn at the defined point. Fly-by turns use the standard turn type for the routes as they allow aircraft to turn from one track onto another smoothly using the most appropriate turn radius for the aircraft. However, the turn point has to be placed at a sufficient distance to ensure the fastest aircraft doesn’t start turning before 1500 metres from the end of the runway. This will result in more aircraft continuing to fly straight ahead to Troon before starting their turn to the south.
- Alternative 2** – We considered specifying the initial turn to the southeast on a specified altitude above the ground. This has the environmental advantage of ensuring aircraft turn as soon as they reach a safe altitude. However, it also causes significant dispersion of the traffic as lighter aircraft that climb will turn much earlier while heavier aircraft will take a lot longer (and travel further) to reach the same altitude and will therefore turn later. This dispersion makes it very difficult for air traffic control to integrate the traffic together and ensure aircraft separation.
- Alternative 3** – We considered designing a route that connects with the design criteria for the initial turn then brings aircraft back to the current conventional route. This would have the same impact on Troon as the preferred route and would result in problems with aircraft flying the route due to the number of turns in close proximity.

This table compares the impact of each route

	Preferred	Alt. 1	Alt. 2	Alt. 3
CO ₂ emissions	Low	Low	Variable	Low
Noise – Population Overhead	Low	Low	Low	Low
Noise – New Population	0	0	Low	0
Concentration / Dispersion	Concentration	Concentration	Dispersion	Concentration
Technical Feasibility	Good	Good	Difficult	Good
Community	Impact (compared to current day)			
Troon	Closer	Closer	Closer	Closer
Dunoon	Same	Same	Partially Overhead	Same
Apr	Same	Same	Partially Overhead	Same

Runway 30 – departures to the east

This is a new route intended to provide a more environmentally efficient route for aircraft departing to destinations such as Northern Europe, Russia, or the Far East.



Runway 30 departures to the east – preferred and alternative routes over population density maps

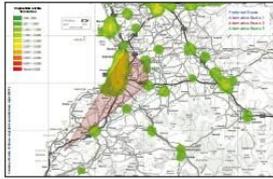
- Preferred** – Departures from runway 30 currently fly straight ahead for approximately 1500 metres before turning to the southeast over the Ribs of Clyde. The current design criteria prohibit the turn point from being defined any closer than 1500 metres from the end of the runway. This slight extension to the straight flight has a small noise impact on the town of Troon. The preferred route then turns to the south and then over the Ribs before turning to the east and connecting to a point overhead the old Turnberry (RIBS) navigation aid.
- Alternative 1** – We considered designing the route using a “fly-by” turn rather than a “fly-over” turn. The preferred route uses a “fly-over” turn to ensure that all aircraft start their turn at the defined point. Fly-by turns use the standard turn type for the routes as they allow aircraft to turn from one track onto another smoothly using the most appropriate turn radius for the aircraft. However, the turn point has to be placed at a sufficient distance to ensure the fastest aircraft doesn’t start turning before 1500 metres from the end of the runway. This will result in more aircraft continuing to fly straight ahead to Troon before starting their turn to the east.
- Alternative 2** – We considered specifying the initial turn to the east on a specified altitude above the ground. This has the environmental advantage of ensuring aircraft turn as soon as they reach a safe altitude. However, it also causes significant dispersion of the traffic as lighter aircraft that climb will turn much earlier while heavier aircraft will take a lot longer (and travel further) to reach the same altitude and will therefore turn later. This dispersion makes it very difficult for air traffic control to integrate the traffic together and ensure aircraft separation.
- Alternative 3** – We considered designing a route that connects with the design criteria for the initial turn then brings aircraft back to the current conventional route. This would have the same impact on Troon as the preferred route and would result in problems with aircraft flying the route due to the number of turns in close proximity.

This table compares the impact of each route

	Preferred	Alt. 1	Alt. 2	Alt. 3
CO ₂ emissions	Low	Low	Variable	Low
Noise – Population Overhead	Low	Low	Low	Low
Noise – New Population	0	0	Low	0
Concentration / Dispersion	Concentration	Concentration	Dispersion	Concentration
Technical Feasibility	Good	Good	Difficult	Good
Community	Impact (compared to current day)			
Troon	Closer	Closer	Closer	Closer
Dunoon	Same	Same	Partially Overhead	Same
Apr	Same	Same	Partially Overhead	Same

Runway 12 – departures to the southwest

This is a replacement for the existing 'T01' departure route.



Runway 12 departures to the southwest – preferred and alternative routes over population density map

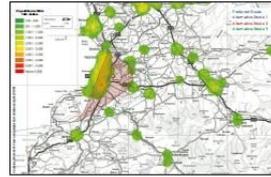
- Preferred** – In order to minimise the noise impact for the greatest number of people, we have maintained the current track between Hoddson and Ardross rather than making an earlier turn to the south. However, we have moved the turning point slightly closer to the airport in order to reduce the noise impact on Girden. This puts the aerobics of the preferred route slightly closer to Hillhead and Croyton but in areas of low population. In the countryside between Hillhead and Girden, the new route then makes the current noise in the vicinity of Hillhead and Girden a noise corridor to the east (T01) corridor.
- Alternative 1** – We considered specifying the turn to the south as soon as possible from the end of the runway. However, this route would directly overfly Ardross as well as Girden. While a reduced track mileage would result in lower CO₂ emissions, CAA guidance states that minimizing noise impact should be the priority below AODOR, therefore this isn't our preferred route.
- Alternative 2** – We considered specifying the initial turn to the southeast based on a specified altitude above the ground. This has the environmental advantage of ensuring aircraft turn as soon as they reach a safe altitude. However, it also causes significant dispersion of the traffic as higher aircraft that climb will turn much earlier while heavier aircraft will take a lot longer (and travel further) to reach the same altitude and will therefore turn later. This results in a much larger area being subjected to overflight albeit on a less frequent but long red-tail climb.
- Alternative 3** – We considered replicating the current departure route as closely as possible. This does not introduce any new problems but it doesn't provide any improvement for the people in Girden.

This table compares the impact of each route

	Preferred	Alt. 1	Alt. 2	Alt. 3
CO ₂ emissions	Low	Low	Variable	Same
Noise - Population Overflown	7566	6280	5460	6270
Noise - New Population	5,155	6,441	5,152	5,152
Concentration / Dispersion	Concentration	Dispersion	Dispersion	Concentration
Technical Feasibility	Good	Good	Good	Good
Community	Impact (compared to current day)			
Hoddson	Same	Similar	Similar	Same
Ardross	Same	More Overflown	More Overflown	Same
Girden	Similar	Similar	Overflown	Same
Hillhead	Similar	Overflown	Overflown	Same
Croyton	Similar	Overflown	Overflown	Same
Bankston	Similar	Overflown	Overflown	Same
Rayburn	Similar	Overflown	Overflown	Same
Rayburn	Similar	Overflown	Overflown	Same
Air	Same	Over	Similar	Same

Runway 12 – departures to the west

This is a new route intended to provide a more environmentally efficient route for aircraft departing to destinations such as Iceland, North America, or South America.



Runway 12 departures to the west – preferred and alternative routes over population density map

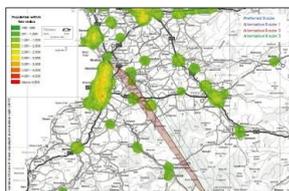
- Preferred** – In order to minimise the noise impact for the greatest number of people, we have maintained the current track between Hoddson and Ardross rather than making an earlier turn to the south. However, we have moved the turning point slightly closer to the airport in order to reduce the noise impact on Girden. This puts the aerobics of the preferred route slightly closer to Hillhead and Croyton but in areas of low population. In the countryside between Hillhead and Girden, the new route then turns to the west and continues to a point called HODON on the new runway to the west.
- Alternative 1** – We considered specifying the turn to the south as soon as possible from the end of the runway. However, this route would directly overfly Ardross as well as Girden. While a reduced track mileage would result in lower CO₂ emissions, CAA guidance states that minimizing noise impact should be the priority below AODOR, therefore this isn't our preferred route.
- Alternative 2** – We considered specifying the initial turn to the southwest based on a specified altitude above the ground. This has the environmental advantage of ensuring aircraft turn as soon as they reach a safe altitude. However, it also causes significant dispersion of the traffic as higher aircraft that climb will turn much earlier while heavier aircraft will take a lot longer (and travel further) to reach the same altitude and will therefore turn later. This results in a much larger area being subjected to overflight albeit on a less frequent but long red-tail climb.
- Alternative 3** – We considered replicating the initial turn of the current departure route as closely as possible. This does not introduce any new problems but it doesn't provide any improvement for the people in Girden and doesn't provide any environmental benefit.

This table compares the impact of each route

	Preferred	Alt. 1	Alt. 2	Alt. 3
CO ₂ emissions	Low	Low	Variable	Same
Noise - Population Overflown	7301	6178	4730	6540
Noise - New Population	5,155	6,441	5,152	5,152
Concentration / Dispersion	Concentration	Dispersion	Dispersion	Concentration
Technical Feasibility	Good	Good	Good	Good
Community	Impact (compared to current day)			
Hoddson	Same	Similar	Similar	Same
Ardross	Same	More Overflown	More Overflown	Same
Girden	Similar	Overflown	Overflown	Same
Croyton	Similar	Overflown	Overflown	Same
Bankston	Similar	Overflown	Overflown	Same
Rayburn	Similar	Overflown	Overflown	Same
Rayburn	Similar	Overflown	Overflown	Same
Air	Same	Over	Similar	Same

Runway 12 – departures to the southeast

This is a replacement for the existing 'N01' departure route.



Runway 12 departures to the southeast – preferred and alternative routes over population density map

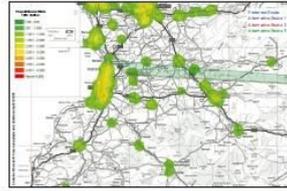
- Preferred** – In order to minimise the noise impact for the greatest number of people, we have maintained the current track between Hoddson and Ardross rather than making an earlier turn to the south. We have then used the same turning point as the route to the southwest and used for the turn to the southeast. This puts the aerobics of the preferred route slightly further to the east and reduces the noise impact on Girden. To improve the situation of these aircraft into the airport, we have also increased the distance to the new route and at a point called S04H which is approximately 6500 metres southeast of the old new Gateway (N01) navigation aid.
- Alternative 1** – We considered specifying the turn to the southeast as soon as possible from the end of the runway. However, this route would directly overfly Ardross as well as Girden. While a reduced track mileage would result in lower CO₂ emissions, CAA guidance states that minimizing noise impact should be the priority below AODOR, therefore this isn't our preferred route.
- Alternative 2** – We considered specifying the initial turn to the southeast based on a specified altitude above the ground. This has the environmental advantage of ensuring aircraft turn as soon as they reach a safe altitude. However, it also causes significant dispersion of the traffic as higher aircraft that climb will turn much earlier while heavier aircraft will take a lot longer (and travel further) to reach the same altitude and will therefore turn later.
- Alternative 3** – We considered replicating the current departure route as closely as possible. This does not introduce any new problems but it doesn't provide any improvement for the people in Girden.

This table compares the impact of each route

	Preferred	Alt. 1	Alt. 2	Alt. 3
CO ₂ emissions	Low	Low	Variable	Same
Noise - Population Overflown	7337	6440	5274	6727
Noise - New Population	5,155	6,441	5,152	5,152
Concentration / Dispersion	Concentration	Dispersion	Dispersion	Concentration
Technical Feasibility	Good	Good	Moderate	Good
Community	Impact (compared to current day)			
Hoddson	Same	Similar	Similar	Same
Ardross	Same	More Overflown	More Overflown	Same
Girden	Similar	Overflown	Overflown	Same
Hillhead	Similar	Overflown	Overflown	Same
Croyton	Similar	Overflown	Overflown	Same
Bankston	Similar	Overflown	Overflown	Same
Rayburn	Similar	Overflown	Overflown	Same
Air	Same	Over	Over	Same

Runway 12 – departures to the east

This is a new route intended to provide a more environmentally efficient route for aircraft departing to destinations such as Northern Europe, Russia, or the Far East.



Runway 12 departures to the east – preferred and alternative routes over population density map

- Preferred** – In order to minimise the noise impact for the greatest number of people, we have maintained the current track between Hoddson and Ardross rather than making an earlier turn to the east. We have then used the same turning point as the route to the southwest and used for the turn to the east called S04H. This keeps aircraft away from all other high altitude operations areas until they are above 10000ft at which point the Aviation Authority (CAA) guidance states that minimizing noise impact should be the priority.
- Alternative 1** – We considered specifying the same turning point as the route to the southwest and west on turning directly to HODON. However, this route would directly overfly Ardross and Girden. While a reduced track mileage would result in lower CO₂ emissions, CAA guidance states that minimizing noise impact should be the priority below AODOR, therefore this isn't our preferred route. This option would also present significant air traffic control challenges due to increased interactions with Glasgow and Edinburgh traffic.
- Alternative 2** – We considered specifying the turn towards HODON as soon as possible from the end of the runway. However, this route would directly overfly Ardross as well as Girden. While a reduced track mileage would result in lower CO₂ emissions, CAA guidance states that minimizing noise impact should be the priority below AODOR, therefore this isn't our preferred route. This option would also present significant air traffic control challenges due to increased interactions with Glasgow and Edinburgh traffic.
- Alternative 3** – We considered specifying the initial turn to the east based on a specified altitude above the ground. This has the environmental advantage of ensuring aircraft turn as soon as they reach a safe altitude. However, it also causes significant dispersion of the traffic as higher aircraft that climb will turn much earlier while heavier aircraft will take a lot longer (and travel further) to reach the same altitude and will therefore turn later. This option would also present significant air traffic control challenges due to increased interactions with Glasgow and Edinburgh traffic.

This table compares the impact of each route

	Preferred	Alt. 1	Alt. 2	Alt. 3
CO ₂ emissions	Low	Low	Variable	Same
Noise - Population Overflown	7376	6440	5410	6560
Noise - New Population	5,155	6,441	5,152	5,152
Concentration / Dispersion	Concentration	Dispersion	Dispersion	Concentration
Technical Feasibility	Good	Good	Good	Good
Community	Impact (compared to current day)			
Hoddson	Same	Similar	Similar	Same
Ardross	Same	More Overflown	More Overflown	Same
Girden	Similar	Overflown	Overflown	Same
Croyton	Similar	Overflown	Overflown	Same
Bankston	Similar	Overflown	Overflown	Same
Rayburn	Similar	Overflown	Overflown	Same
Rayburn	Similar	Overflown	Overflown	Same
Air	Same	Over	Over	Same

Runway 30 arrivals

General factors influencing design

Runway 30 will be used by aircraft arriving at the airport via one of the Standard Instrument Arrivals (SIAs). Aircraft will enter from the south, approach the runway directly without holding or from the east.

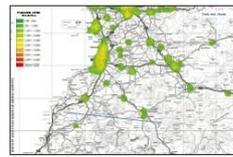
When several aircraft arrive at the airport in close succession Air Traffic Control may decide to give each aircraft individual instructions rather than having them follow the published arrival route. This may be to improve operational efficiency, minimise delays to subsequent aircraft, or to ensure the correct separation between aircraft is applied. In such instances, the aircraft are likely to fly within the same south-east to north-west axis.

This table shows anticipated aircraft arrivals at runway 30

Year	2018	2019	2020	2021	2022	2023
South	78	97	106	108	110	113
East	78	97	106	108	110	113

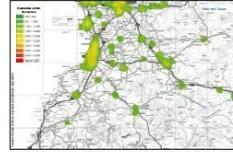
Note: Further information on runway 30 arrivals is provided in the consultation document, section 6.53 and 6.51

For these arrivals, we have only indicated a preferred route. These routes have been designed and evaluated according to the design principles listed in the consultation document, section 6.51.



Runway 30 arrivals from the south - preferred route over population density map

Preferred -
This route will be used by aircraft arriving at the airport via one of the Standard Instrument Arrivals (SIAs) that end at a point overhead the old Turnberry (OTN) navigation aid. Aircraft will hold at OTN until instructed by Air Traffic Control to leave the hold. This procedure will then deliver them to the start of the approach procedure for runway 30. As the majority of this route remains above 7000ft the main priority has been to minimise emissions. This route is therefore a straight line from OTN to the southern entry to the runway 30 approach procedure.



Runway 30 arrivals from the east - preferred route over population density map

Preferred -
This route will be used by aircraft arriving at the airport via one of the Standard Instrument Arrivals (SIAs) that end at the point called S1015. Aircraft are only sent to S1015 when the traffic situation allows them to continue directly to an approach without holding. This procedure will then deliver them to the start of the approach procedure for runway 30. As the majority of this route remains above 1000ft the main priority has been to minimise emissions. This route is therefore a straight line from S1015 to the western entry to the runway 30 approach procedure.

Runway 12 arrivals

General factors influencing design

Runway 12 will be used by aircraft arriving at the airport via one of the Standard Instrument Arrivals (SIAs). All aircraft will enter from the south and may be instructed to hold, depending on the traffic situation.

When several aircraft arrive at the airport in close succession Air Traffic Control may decide to give each aircraft individual instructions rather than having them follow the published arrival route. This may be to improve operational efficiency, minimise delays to subsequent aircraft, or to ensure the correct separation between aircraft is applied. In such instances, the aircraft are likely to fly within the same south-east to north-west axis.

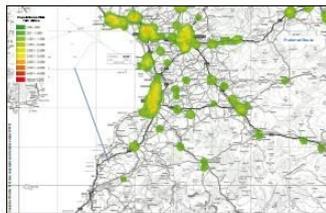
This table shows anticipated aircraft arrivals at runway 12

Year	2018	2019	2020	2021	2022	2023
South	39	49	53	54	56	57

Note: Further information on runway 12 arrivals is provided in the consultation document, section 6.52

For this arrival, we have only indicated a preferred route. This route has been designed and evaluated according to the design principles listed in the consultation document, section 6.51.

Runway 12 arrivals from the south



Runway 12 arrivals from the south - preferred route over population density map

Preferred -
This route will be used by aircraft arriving at the airport via one of the Standard Instrument Arrivals (SIAs) that end at point overhead the old Turnberry (OTN) navigation aid. Aircraft will hold at OTN until instructed by Air Traffic Control to leave the hold. This procedure will then deliver them to the start of the approach procedure for runway 12.

As the majority of this route remains above 7000ft the main priority has been to minimise emissions. This route is therefore a straight line from OTN to the southern entry to the runway 12 approach procedure.

Runway 21 arrivals

General factors influencing design

For these arrivals, we have only indicated a preferred route. These routes have been designed and evaluated according to the design principles listed in the consultation document, section 6.51.

When several aircraft arrive at the airport in close succession Air Traffic Control may decide to give each aircraft individual instructions rather than having them follow the published arrival route. This may be to improve operational efficiency, minimise delays to subsequent aircraft, or to ensure the correct separation between aircraft is applied. In such instances, the aircraft are likely to fly within the same south-east to north-west axis.

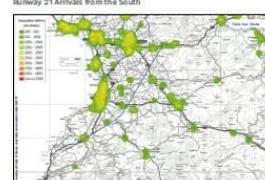
This table shows anticipated aircraft arrivals at runway 21

Year	2018	2019	2020	2021	2022	2023
South	1	1	1	1	1	1
East	1	1	1	1	1	1

Note: Further information on runway 30 arrivals is provided in the consultation document, sections 6.53 and 6.54

For these arrivals, we have only indicated a preferred route. These routes have been designed and evaluated according to the design principles listed in the consultation document, section 6.51.

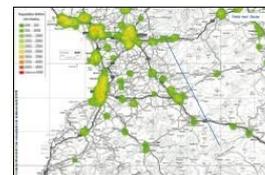
Runway 21 Arrivals from the South



Runway 21 arrivals from the south - preferred route over population density map

Preferred -
This route will be used by aircraft arriving at the airport via one of the Standard Instrument Arrivals (SIAs) that end at a point overhead the old Turnberry (OTN) navigation aid.

Aircraft will hold at OTN until instructed by Air Traffic Control to leave the hold. This procedure will then deliver them to the start of the approach procedure for runway 21. As the majority of this route remains above 7000ft the main priority has been to minimise emissions. This route is therefore a straight line from OTN to the southern entry to the runway 21 approach procedure.



Runway 21 arrivals from the east - preferred route over population density map

Preferred -
This route will be used by aircraft arriving at the airport via one of the Standard Instrument Arrivals (SIAs) that end at the point called S1015. Aircraft are only sent to S1015 when the traffic situation allows them to continue directly to an approach without holding. This procedure will then deliver them to the start of the approach procedure for runway 21.

As the majority of this route remains above 1000ft the main priority has been to minimise emissions. This route is therefore a straight line from S1015 to the western entry to the runway 21 approach procedure.

APPENDIX D – TABLE SUMMARISING TOWNS AND VILLAGES NEAR EACH FLIGHTPATH

Are flightpaths close to my town or village?

This chart indicates towns and villages that are closest to the routes under review. While this could help identify the routes you wish to comment on, please do review the full consultation document in order to make an informed assessment.

Type	Departures								Arrivals					Approaches		
	30				12				30		12		21	30	12	21
Direction	SW	W	SE	E	SW	W	SE	E	S	E	S	S	E			
Consult Doc. Section	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	6.10	6.11	6.12	6.13	6.14	6.15	6.16	6.17
Annbank																
Auchinleck																
Ayr																
Cabrine																
Coylton																
Crookedholm																
Cumnock																
Dalrymple																
Daniel																
Drongan																
Dunure																
Ferwick																
Galtton																
Hillhead																
Hollybush																
Kilmarnock																
Kilmaurs																
Mansfield																
Mauchline																
Mossblown																
New Cumnock																
Newmilns																
Ochiltree																
Patna																
Rankinston																
Saltcoats																
Sorn																
Stewarton																
Symington																
Tarbolton																
Troon																

- The preferred route overflies all or part of this community
- The preferred route or one of the alternative routes fly within 3,000 metres of this community
- Neither the preferred route or any of the alternative routes fly within 3,000 metres of this community

NB Proposals for each route including preferred routes and, where appropriate, the alternatives considered can be found in the consultation document and are summarised in the exhibition panels (available on the website).

APPENDIX E – MEDIA RELEASES

For immediate release – Thursday 15 June 2017

Glasgow Prestwick Airport Launches Airspace Change Consultation

Glasgow Prestwick Airport is starting an Airspace Change consultation, inviting members of the public to see its plans and contribute their views.

Navigation aids used for managing airspace are being replaced or removed as part of a national upgrade programme. As a result, airports across the UK are required to review their airspace management to develop procedures using the new state-of-the-art equipment.

Glasgow Prestwick Airport is seeking to replicate its existing flight paths as closely as possible, also using this opportunity to ensure routes are as efficient and environmentally friendly as possible while minimising noise impact on communities.

It is holding a 13-week consultation, starting on June 14 and ending on September 13, outlining potential departure and arrival routes.

This involves showing proposals to the general public alongside airport stakeholders, local authorities, MPs, MSPs and community councils.

Three public exhibitions will be hosted between 10am and 7pm, at:

- 22 June in the Aviator Suite at **Glasgow Prestwick Airport**
- 27 June at **Kilmarnock** Grand Hall
- 5 July at **Coylton** Parish Church Hall

The full consultation document is available to view online on Glasgow Prestwick Airport's website and information will also be sent to libraries across the region.

Ron Smith, chief executive officer of Glasgow Prestwick Airport said:

"This project is a significant investment for Glasgow Prestwick Airport. We are undertaking this as part of a national programme of air space change.

"Although we anticipate the change to be minimal, we are keen to ensure that we have consulted with the communities that host our operations.

"We are doing our utmost to make information on what we are proposing available – sharing the information in as many ways as possible. We look forward to receiving feedback and working through this along with the regulatory, technical and environmental considerations to finalise our proposals for the Civil Aviation Authority to approve.

Members of the public are encouraged to submit feedback online or by post on the suggested designs.

An Airspace Change Process is being undertaken by the majority of major airports across the UK, which have been using old-format equipment since the mid-1960s. There is now a need to modernise procedures to be compatible with new, state of the art satellite-based systems. Once the consultation is closed, all feedback will be reviewed as part of the process to finalise technical designs. The findings will be published to show how they influenced the completed airspace map.

For more information visit website address glasgowprestwick.com/airspace

ENDS

Media contact

Kirsten Sweeney, Communications and Marketing Manager, 01292 511 148,
ksweeney@glasgowprestwick.com

APPENDIX F - ADVERTISING



Airspace Change Consultation

14 June – 13 Sept 2017

Glasgow Prestwick Airport is preparing an Airspace Change Proposal. This is a process many UK airports are undertaking because of the removal of old navigational aids as part of a national replacement/decommissioning programme that is moving to state of the art satellite-based systems.

This has given us the chance to see if there are improvements we can make to how we use our airspace, making it even more accurate and efficient, ensuring it is as environmentally-friendly as possible.

To obtain a copy of the consultation document, or find out more, visit: www.glasgowprestwick.com/airspace

We will also be hosting public exhibitions (all 10am-7pm)

- 22 June in the Aviator Suite at Glasgow Prestwick Airport
- 27 June at Kilmarnock Grand Hall
- 5 July at Coylton Parish Church Hall

You can also request a consultation document by writing to us at:
Airspace Change Consultation, Glasgow Prestwick Airport, Aviation House, Prestwick, KA9 2PL.

Half page advertisements placed on June 14 and June 21 in Ayrshire Post, Irvine Herald and Kilmarnock Standard.

APPENDIX G – SUMMARY OF ORGANISATIONS

Air Related

Local Businesses/Organisations

Bute Airfield

Arran Heliport

Glasgow City Heliport

Glasgow International Airport

Strathaven Airfield

Stonehill Farm Airstrip

Local Recreational Clubs

Dumfries & District Gliding Club

Glasgow Flying Club

Prestwick Flying Club

National Recreational Clubs

British Association of Balloon Operators

British Gliding Association

British Microlight Aircraft Association

Light Aircraft Association

Scottish Gliding Centre

The Scottish Flying Club

Other Transport

British Horse Society

UK Government Department for Transport

Transport Scotland

Network Rail

Confederation of Passenger Transport

Sustrans Scotland

Local businesses

Secret Scotland Tours

Burns Heritage

Visit Scotland Ayr

Halo Communications

Speednet Networks

SP Energy Networks

Nichol McKay

Marchburn Business Solutions
Avidscot Consulting
Launch
Lighthouse IT
Firstax
Welsh Walker
Bank of Scotland
Frazer Coogans Commercial Solicitors
Munro Partnership Chartered financial planners

Education

Ayrshire College
Marr College
Ayr Campus, University of the West of Scotland

Sports Clubs

Kilmarnock Golf Club
Belleisle and Seafield Golf Club
Royal Troon Golf Club
Prestwick Golf Club
Ayr United Football Club
Kilmarnock Football Club

Representation Organisations

Scottish Enterprise
Ayrshire Chamber of Commerce & Industry
Business Gateways
Accelerate Ayrshire

Public Services

Ayrshire & Arran NHS
NHS Greater Glasgow and Clyde

Community Groups

Scottish Homing Union
Rotary Club of Ayr

Other

Barr
Buzzworks Holdings
Hillhouse Quarry Group
Mackay Corporate Insurance Brokers
VOCA
Westsound
Williamduncan & Co
Westfield Health
QTS training
Ingram Motoring Group
Trump Turnberry

National Tourism

Association of Scottish Visitor Attractions
Scottish Tourism Alliance
Visit Scotland Head Office

National Utilities

British Gas
RWE npower

Scottish Power
Scottish Renewables
Scottish Water
Scottish and Southern Energy
National Grid Gas
Scottish Gas Networks

Relevant Sports Clubs/Organisations

Sport Scotland

Representation Organisations

CBI Scotland
Scottish Association of Self Caterers
The Scottish Gamekeepers association
Fisheries Protection Agency
Forest Enterprise Scotland
Royal Highland and Agricultural Society of Scotland
Scottish Council for Development and Industry (SCDI)
Federation of Small Businesses (West of Scotland, Ayrshire branch)
Scottish Enterprise Headquarters
Scotland Food & Drink
Institute of Directors
Scottish Chamber of Commerce
Hoteliers Association

Public Bodies

Health and Safety Executive
COSLA
Scottish Natural Heritage
Scottish Natural Heritage Headquarters
National Trust for Scotland
Historic Environment Scotland
Historic Scotland

Public Services

Police Scotland
Scottish Fire and Rescue Service
Scottish Ambulance Service
Maritime and Coastguard Agency

Defence/Nuclear/Gov Security Agencies

Civil Nuclear Police Authority
Ministry of Defence
Nuclear Defence Safety Authority

CommunityTown Planning Associations

Community Planning Partnerships

Environmental

Sepa (Ayr office)
Association for the Protection of Rural Scotland
Bat Conservation Trust
Scotland's Bird Club
British Trust for Ornithology Scotland
Buglife - the Invertebrate Conservation Trust
Climate Camp
WWF Scotland
Woodland Trust

Wilderness Foundation
Scottish Wildlife Trust
RSPB Scotland
Scottish Badgers
Forestry Commission Scotland
Game Wildlife Conservation Trust
Friends of the Earth Scotland
Greenpeace
Plantlife

Landowner Representatives

Crown Estate
NFU Scotland

Community Councils

Irvine Community Council
South Ayrshire Council
Troon Community Council
Prestwick North Community Council
Prestwick South Community Council
Newton and Heathfield Community Council
North Ayr Community Council
Belmont, Kincaidston and St Leonards Community Council
Forehill, Holmston and Masonhill Community Council
Alloway and Doonfoot Community Council
Craigie Community Council
Dundonald Community Council
Loans Community Council
Mossblown and St Quivox
Symington Community Council
Annbank and Coylton Community Council
Crosshill, Straiton and Kirkmichael Community Council
Dunure Community Council
Kirkoswald, Maidens and Turnberry Community Council
Maybole Community Council
Minishant Community Council
Ballantra Community Council
Barr Community Council
Barrhill Community Council
Colmonell and Lendalfoot Community Council
Dailly Community Council
Girvan and District Community Council
Pinwherry and Pinmore Community Council
Grange/Howard Community Council
Crosshouse Community Council
Piersland-Bentinck Community Council
Sorn Community Council

MSPs

Ayr
Carrick, Cumnock and Doon Valley
Kilmarnock and Irvine valley
South Scotland (7 contacts)

MPs



Ayr, Carrick & Cumnock
Kilmarnock & Loudon

Cllrs

(30 contacts)

Council Offices

South Ayrshire Council
North Ayrshire Council
East Ayrshire Council

Scottish Government

Ministers, shadow ministers and spokespeople

Minister for Transport and the Islands
Labour Shadow Minister for Transport and Town Centres
Conservative spokesman on Transport and Infrastructure
Greens Spokesperson for Justice, Transport, Tourism, Rural & island Communities

Rural Economy and Community Committee

Convener
Deputy Convener
Member (9 contacts)

Infrastructure and Investment Board

Secretariat

MSPs part of the Cross-Party group on Aviation (6 Contacts)

Organisations part of the Cross-Party group on Aviation

Edinburgh Airport
Glasgow Airport
Aberdeen Airport
Highlands & Islands Airports
easyJet
Flybe
British Airways
Virgin
Loganair
Barrhead Travel
Scottish Passenger Agents Association
Scottish Enterprise
Scottish Chamber of Commerce
Visit Scotland
Nestrans
Hitrans
Scottish Council for Development and Industry
British Air Transport Association
Global Trek Aviation

UK Gov Department for Transport

Ministers (5 contacts)

Management (3 contacts)

APPENDIX H – CONSULTATION FEEDBACK LETTERS AND, DETAILED RESPONSES

H.1 British Gliding Association (reply to notes in response form)



First of all I would like to thank you for taking the time to write in with your feedback on the proposed airspace changes at Glasgow Prestwick Airport. Please see the below response to your feedback.

Q11 – Runway 30 Departures (Southwest)

The proposed changes at Glasgow Prestwick Airport only relate to the construction of flight procedures; there are no planned changes to the actual airspace structure within the scope of this project. It is worth noting that the newly designed approaches are as steep as the extant routes and due to the surrounding terrain at the airport, they are as steep as international regulations permit.

Q36 – Comments on the Consultation

Prior to the consultation opening in June we did contact a large number of different stakeholders of the airport, including General Aviation communities such as local flying clubs and gliding clubs. We have received feedback from several stakeholders from the GA community. We also held several roadshows and communicated regularly over social media/ local media during the consultation to reach out to as many interested parties as possible. We will ensure that all feedback and relevant information surrounding GA activity will be included in the Airspace Change Proposal we submit to the CAA.

Q37 - Additional Comments

As per above, unfortunately it is not in the scope of current publications to propose changes to any of the airspace structures around Glasgow Prestwick Airport, or change the airspace classification.

Please let me know if you have any additional questions following the above. Thank you again for your continued support to this airspace change project.

Kind Regards

Steve Thomson
Manager Air Traffic Services

Airspace Change Consultation

Aviation House, Prestwick, Ayrshire, Scotland, KA9 2PL

T: +44 (0)1292 511000 F: +44 (0)1292 511010 E: airspacechangeconsultation@glasgowprestwick.com
www.glasgowprestwick.com/airspace

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H.2 Glasgow Airport



11th September 2017

Glasgow Airport – Formal Response to ACP Consultation 2017

Dear Consultation Coordinator,

Following our meeting at Prestwick Airport on 19th July 2017, as discussed please find Glasgow Airports comments on the Airspace Change Proposal below.

Glasgow Airport fully support modernisation of airspace in line with FAS objectives. We are generally satisfied with the level of engagement we have had with you in ensuring, as far as possible, that the designs integrate with the Glasgow airspace and ATM operation. We would request that this continues via the Northern FASI forum until implementation and integration are complete.

Glasgow Airport would stress that extant procedures between Glasgow and Prestwick ATC are vital for ensuring a safe and efficient delivery of air traffic into the network. To that end, the preservation of the evolved and formalised procedures, in place prior to transition to the new designs, are fundamental to the success of the integration of these proposals. The comments below reflect that need and relate to the sections outlined in the Prestwick consultation document.

6.2: Runway 30 Departures to the Southwest

From Glasgow's perspective, the proposed route replicates the existing route and does not affect Glasgow.

6.3: Runway 30 Departures to the West

The route as proposed turns away from Glasgow airspace and, as such, does not affect Glasgow.

6.4: Runway 30 Departures to the Southeast

The route as proposed is similar to the routes that exist already; it turns away from Glasgow airspace and, as such, does not affect Glasgow.

6.5: Runway 30 Departures to the East

The route, as proposed, turns away from Glasgow airspace and, as such, does not affect Glasgow.

Glasgow Airport Limited, Erskine Court, St Andrews Drive, Paisley PA3 2SW
T +44 (0)1444 481 5555 E info@glasgowairport.com
glasgowairport.com twitter.com/GLA_Airport

Glasgow Airport Limited, Registered in Scotland No. SC291434, Registered Office: St Andrews Drive, Glasgow Airport, Paisley, PA3 2SW

6.6: Runway 12 Departures to the Southwest

From Glasgow's perspective, the proposed route replicates the existing route and does not affect Glasgow.

6.7: Runway 12 Departures to the West

The route, as proposed, turns away from Glasgow airspace and, as such, do not affect Glasgow.

6.8: Runway 12 Departures to the Southeast

The route, as proposed, turns away from Glasgow airspace and, as such, does not affect Glasgow.

6.9: Runway 12 Departures to the East

The preferred route as proposed remains South of Glasgow airspace and, as such, should not affect Glasgow. There is a risk that the alternative routes as described would interact with Glasgow airspace and would not be supported by Glasgow. The positioning of the LANAK hold is currently under consideration as part of the wider Scottish airspace change. We would support continued dialogue to ensure that the routes remain fit for future use.

6.10: Runway 30 Arrivals from the South

The route as described remains to the South and, as such does not affect Glasgow.

6.11: Runway 30 Arrivals from the East

The route as described is as flown today and, as such, does not affect Glasgow.

6.12: Runway 12 Arrivals from the South

The route as described remains to the South and, as such does not affect Glasgow.

6.13: Runway 21 Arrivals from the South

Providing procedures between Glasgow ATC and Prestwick ATC are formalised and the anticipated usage remains in line with current usage, Glasgow would not object to the proposed arrival route however, please see the comments below relating to "Runway 21 Approaches".

6.14: Runway 21 Arrivals from the East

Providing procedures between Glasgow ATC and Prestwick ATC are formalised and the anticipated usage remains in line with current volumes, Glasgow would not object to the proposed arrival route.

6.15: Runway 30 Approaches

The IAF on the T Bars remain South of Glasgow Airspace and, as such would not normally affect Glasgow. Procedures exist currently that describe how flights to and from Glasgow and Prestwick safely interact in this area and our expectation would be that these procedures continue to be employed post implementation.

6.16: Runway 12 Approaches

The IAF on the T Bars remain South of Glasgow Airspace and, as such would not normally affect Glasgow. Procedures exist currently that describe how flights to and from Glasgow and Prestwick safely interact in this area and our expectation would be that these procedures continue to be employed post implementation.

6.17: Runway 21 Approaches

The IAF on the T Bar proposed for runway 21 arrivals to Prestwick sits within or adjacent to Glasgow airspace and interactions with Glasgow arrivals are possible when Glasgow is operating on runway 05. Current operating arrangements would require individual coordination between ATC for access to Glasgow airspace for a runway 21 arrival. The current arrangements are appropriate given the usage, however given the options available, Glasgow would prefer "alternative 1" as described in Figure 79 which reduces the likelihood of interaction with Glasgow air traffic.

Yours sincerely,

H.2.1 Glasgow Airport reply



Firstly, thank you very much for taking the time to respond to the Glasgow Prestwick Airport airspace change consultation and also for accommodating a phone call last week, which I would like to formally summarise below.

Your feedback referenced the LANAK hold position which is currently under consideration as part of the PLAS project. I have spoken to the NATS PC PLAS team and they confirmed that this is completely out of scope for the Glasgow Prestwick Airport airspace change proposal.

I have spoken to Glasgow Prestwick Airport who are in agreement that the arranged procedures with yourselves at Glasgow Airport are essential to the success of this airspace change proposal. These are currently being updated and have been revised to remove the 3NM separation coordination between both airports.

As mentioned over the phone, unfortunately our design team has concluded that the "Alternative 1" option for the Runway 21 approach does not provide adequate obstacle clearance. This has arisen from the different method of obstacle assessment used for the new navigation spec. As such, the original choice for the Runway 21 approach will remain which does mean that the IAF on the T Bar is closer to Glasgow airspace than the "Alternative 1". However I did explain that this route is currently seldom used (about 1 per week) which will not increase following the proposed changes. As such, coordination will be similar to the extant situation.

Please let me know if you have any additional questions following the above. Thank you again for your continued support to this airspace change project.

Kind Regards



H.3 The Honourable Company of Air Pilots

From:

Sent:

To: Communications

Subject: Glasgow Prestwick Airport Airspace Change Consultation

Thank you for approaching us on your proposed airspace change.

I can confirm that we have no objection to your proposals.

Regards,

Director of Aviation Affairs

The Honourable Company of Air Pilots

Cobham House

[9 Warwick Court](#)

[Gray's Inn](#)

[LONDON WC1R 5DJ](#)

www.airpilots.org [+44\(0\) 2074 044 032](tel:+44(0)2074044032)

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H.4. MOD



Defence Airspace and Air Traffic Management
7th Floor
CAA House
45-59 Kingsway
London
WC2B 6TE

Telephone: +44 (0)207 453 6592

Email: DAATM-
AirspaceStratSO2@mod.uk

Airspace Consultation
Glasgow Prestwick Airport

5 Sep 17

MOD RESPONSE TO THE GLASGOW PRESTWICK AIRSPACE CHANGE PROPOSAL DOCUMENT

Thank you for the opportunity to comment on your airspace change proposal.

The MoD have no comments or objections however, would wish to be re-engaged should aspects of the proposal change.

Please contact the undersigned should you require any additional information.

Yours faithfully,

— Squadron Leader
SO2 Airspace Strategy

H.5 British Horse Society reply

From:

Sent: 12 September 2017 15:42

Subject: Glasgow Airspace Change Consultation Response

Hi

I work within the Airspace Change Assurance team at NATS and am involved in supporting the Airspace Change Project at Glasgow Prestwick Airport.

Firstly, I wanted to thank you for your response to the consultation and proposed changes. All responses, including those relating to fauna/ flora, will be fully considered upon closer of the consultation period. We will seek to balance all views and suggestions against those of other stakeholders.

I also wanted to assure you that we have tried to reach out and contact as many relevant stakeholders and local persons as possible. This has included several press releases to local papers and announcements on the radio, social media notices and three separate roadshows in the surrounding area. We have also ensured all relevant information be available.

Finally, if you have any additional points relating to the proposed arrival/ departure routes I would like to encourage you to submit these before the consultation closes tomorrow (13th September) at midnight.

Thank you again for taking the time to respond.

Kind regards,



Airspace Change Specialist

|
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www.nats.co.uk

H.6 Scottish Natural Heritage



Scottish Natural Heritage Dualchas Nàdair na h-Alba

All of nature for all of Scotland
Nàdair air fad airson Ìlha air fad

Glasgow Prestwick Airport Limited
Glasgow Prestwick Airport
Airspace Change Consultation Team
Aviation House
PRESTWICK
KA9 2PL

Date: 21 July 2017

Our Ref: CNS/DC/SA: CPP146665

Dear Sirs

Airspace Change Consultation Document

Thank you for consulting Scottish Natural Heritage (SNH) over the proposed revision of arrival and departure routes from Prestwick Airport.

I can confirm that the proposed changes will have no significant impacts on any specially protected sites or species.

If you would like to discuss the proposals further, please do not hesitate to get in touch.

Yours faithfully

H.7 NATS



Airspace Change Consultation
Glasgow Prestwick Airport
Aviation House
Prestwick
KAG 2PL

NATS
Future ATM & Policy
Corporate & Technical Centre
4000 Parkway
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PO15 7FL
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14th September 2017

Dear Reader

NATS RESPONSE TO GLASGOW PRESTWICK AIRPORT AIRSPACE CHANGE CONSULTATION

Thank you for providing NATS the opportunity to respond to your consultation for the establishment of new Arrival and Departure routes from Glasgow Prestwick Airport and we have read the material with interest. NATS supports the introduction of PBN procedures in general as enabling improvements in the safety and efficiency of UK airspace.

At this stage NATS full support for the procedure design options is conditional on Glasgow Prestwick Airport addressing the following comments regarding their impact on the NATS operation. We would like these to be addressed before the ACP submission, as confirmed by Glasgow Prestwick Airport in section 8 of the consultation document.

1. New Departure & Arrival routes

- 1.1 The preferred new route from Runway 12 to the east remains south of NATS Glasgow airspace and therefore there is no assumed impact. However if after the consultation Glasgow Prestwick Airport decide that either of the alternative routes is the preferred option, then it would interact with NATS Glasgow airspace and so further dialogue would be required.
- 1.2 The new route from Runway 12 to the east and its alternatives would interact with the Glasgow LANAK hold. Although the hold's current position is under consideration as part of the wider Scottish airspace development programme, acceptability of the route's final positioning will be dependent on this activity.
- 1.3 For approaches to Runway 21, the IAF on the T Bars sit within or adjacent to NATS Glasgow airspace and interactions with arrivals are possible when Glasgow airport is operating on runway 05. Current operating arrangements require individual coordination by Glasgow Prestwick Airport for access to NATS Glasgow airspace for such approaches. These are appropriate assuming current levels of usage, however given the options available, NATS Glasgow would prefer

alternative 1 as described, which reduces the likelihood of interaction with Glasgow airport traffic.

- 1.4 For all Runway 21 arrivals and approaches and for Runway 30/12 approaches, we would expect Glasgow Prestwick Airport to engage with NATS Glasgow to agree the acceptability of the existing arrangements, and to develop new ATM procedures to support the revised routes. Dialogue should also be initiated with NATS Glasgow if usage of the routes is anticipated to increase as this may also have an impact on the safety and effectiveness of any agreed procedures.
 - 1.5 For the two new SIDs to the west and east, the consultation material is not clear where these routes end and how they will join the Network. However we have since been working with Glasgow Prestwick Airport to optimise the design and have identified appropriate SID end points and associated link routes. Therefore we would expect these design details to be included within the ACP submission.
 - 1.6 For the new SIDs and new link routes, there will be a requirement for NATS Prestwick to carry out a validation simulation to assure the designs with respect to the impact to the Scottish TMA (ScTMA); this will probably also involve Glasgow Prestwick Airport and NATS Glasgow. The programming for this activity may impact any planned implementation dates.
2. NATS Prestwick internal changes
- 2.1 The new routes will require changes to many NATS Prestwick ATM systems: flight data processing, electronic strip, information support, flight plan processing etc. There is work required to enable these changes and their introduction dates need to be programmed into existing changes processes.
 - 2.2 To enable the new departure routes and intergrate them into the ScTMA, there will be changes to some local ATM procedures and these will need to be developed between Glasgow Prestwick Airport and NATS Prestwick. They will require safety assessment and depending on the final design, may require operational mitigations that affect controller workload. The impact of this is yet to be determined.
 - 2.3 Associated with the procedures, NATS Prestwick will need to develop updates to training courses for new controllers and new training/briefing material for current controllers.
 - 2.4 It is understood that the Glasgow Prestwick Airport target date for implementation of the new procedures is May 2018. At this point the current NATS Prestwick system change programme indicates that in the Q2 2018 window, NATS can only accommodate introduction of the changes as part of the May AIRAC (06/18). If this date slips then the next alternative for NATS is the

September AIRAC (10/18). **Noting this and the other internal change requirements highlighted above, we require Glasgow Prestwick Airport to closely co-ordinate any planned implementation date with the NATS Prestwick.**

3. Other

- 3.1 Figure 5 shows the new arrival routes. The legend indicates that the green routes are "Arrival" routes, however this can cause confusion with the red "STAR" routes, which are the formal arrival routes. As part of the further procedure design work, it would be preferable to replace "Arrival" with "Transition", as this clearly differentiates it from the STAR, and also better describes that part of the procedure from the holding facility to the point where the instrument approach begins.
- 3.2 Further to 3.1, ICAO guidance on 'Transition' procedures is still being developed. However with regards to the naming convention, the CAA has already stated that the procedure should be named after the start point of the Transition. NATS is using this policy guidance in development of its Transition developments so we recommend that for consistency within the UK, Glasgow Prestwick Airport adopt the same convention for the ACP.

NATS welcomes the introduction of PBN routes and are happy to continue to work closely with Glasgow Prestwick Airport to ensure that they are safely and smoothly integrated into the ScTMA. If you would like to discuss any aspects of the points raised above, then please contact Paul Moffat (paul.moffat@nats.co.uk) at the Prestwick Centre in the first instance. However I am happy to be contacted if you still wish to do so.

Kind Regards

H.7.1 Response to NATS

Dear

Thank you very much for responding to the Glasgow Prestwick Airport consultation. Following on from a number of conversations and meetings, we would like to take the opportunity to address the comments raised in your response.

New Departure and Arrival Routes

The preferred option for Runway 12 east departures is the chosen route for the ACP, which will not interact with NATS Glasgow airspace.

As raised in your response, the LANAK hold is currently under consideration as part of the NATS PLAS project however this is completely out of scope for this ACP which NATS PC have confirmed. The PLAS simulations in November will include the EGPK route designs but as mentioned, this is completely separate to the ACP.

The alternative route for Runway 12 arrivals does not provide the required obstacle clearance as different parameters have had to be adhered to from using a new method of navigation. Choosing this route would also have a detrimental effect on Kilmarnock; moving away being a "closely replicated" route. As such, the preferred option for Runway 12 arrivals has been decided as the chosen route. However we would like to assure you that coordination between Glasgow Prestwick and Glasgow Airport will take place as extant for the preferred route. The route is currently seldom used and there is no plan or expectation for this to increase from, on average, about once a week. The LOA between the two units is integral to the ACP and is currently progressing to reflect these points.

The SIDs, link routes, interface points and route designators will be clearly outlined in the ACP document. This will include the design details in the draft charts, code tables and AIP information. The link routes have been coordinated with NATS PC.

The requirement for a validation simulation was not included as part of the contract between NATS and Glasgow Prestwick Airport. However NATS is currently working towards a solution with Glasgow Prestwick Airport through the training supplied.

NATS Prestwick Internal Changes

Glasgow Prestwick Airport are to carry out changes to their systems and processes internally; this work has been captured in the timeline schedule. We are working towards a deadline of the May AIRAC. Although this date could be quite tight, there were no problems envisaged from PC, workload or otherwise.

A full safety assessment has been completed which will be submitted to the CAA alongside the ACP. No other documentation or assessments are outstanding or needed. There will need to be changes agreed by Supplementary Instruction to standing agreements/ silent handover for the new routes, between Glasgow Prestwick and Glasgow Airport. These will be completed around 30 days before implementation.

All training and associated materials are covered.

The project is fully aware of the tight timeline associated with the May AIRAC date. The AIRAC submission date is 24th February 2018 which is being targeted across all work.

Other

The ACP has been updated to reflect the comment made on the consultation arrival route diagram (Figure 5).

ICARD names have been requested from the CAA and sent on to Glasgow Prestwick Airport in order to name procedures in line with CAA guidance.

I hope that the above responses are helpful. Please do not hesitate to get in touch with any follow-up queries.

H.8 The Guild of Air Traffic Control Officers



The Guild of Air Traffic Control Officers

GUILD OF AIR TRAFFIC CONTROL OFFICERS

Dr Luis G Barbero
Manager Technical and Operations
GATCO
32 Dickens Drive
Whiteley
Fareham
PO15 7LZ
mto@gatco.org
21st September 2017

Dear Sir/Madam

Thank you for the opportunity to comment on the proposed airspace change for departures and arrivals at Glasgow Prestwick Airport.

The Guild of Air Traffic Control Officers (GATCO) is a UK-wide professional organisation which promotes the highest standards in all aspects of air traffic management and is dedicated to the safety of all who travel or gain their livelihood in the air, with membership drawn from both civilian and military controllers. We are heavily involved in the work of the International Federation of Air Traffic Controllers' Associations (IFATCA), which includes representations to ICAO and SES, amongst others.

This letter constitutes our formal response to the consultation.

GATCO firmly believes that change is necessary to improve UK airspace, with the aim of making it safer and more efficient while mitigating the impact of aviation on the environment. In that respect, GATCO is in favour of the introduction of PBN routes and procedures around the UK to simplify UK airspace and improve the accuracy and predictability of tracks flown by aircraft in all stages of flight. With respect to the departure and arrival routes proposed for Glasgow Prestwick, GATCO would like to ask the following question:

- Looking at the departures routes proposed for runway 12 to the Southwest and to the West (figures 37 and 42, respectively), it would appear that an area to the inside of Alternative 2 in both cases has not been considered for the placement of both departure routes, even though they would appear to affect even less people on the ground. We understand that Alternative 2 would not give the predictability sought since the turn is based on reaching a specific altitude but other restrictions could still be used so that the turn happens at the same point. Are there any other reasons that explain not considering the area inside Alternative 2?

In addition and from a general point of view, in order to provide a safe ATC service, it must be ensured that proper training and adequate staffing are provided whenever changes are introduced. It will be incumbent upon the regulator to ensure that Glasgow Prestwick Airport and NATS provide enough and adequate training on the use of the new departure and arrival procedures and their interactions with other traffic flows, to ensure the proposed changes can be delivered safely.

Our membership is committed to the concept that their profession shall enable safe, orderly and expeditious flows of air traffic. Therefore, we are in favour of the proposed departure and arrival routes and procedures at Glasgow Prestwick, with the caveats outlined above.

Yours Sincerely,

H.8.1 The Guild of Air Traffic Control Officers reply



11 October 2017

Dear

First of all I would like to thank you for taking the time to write in with your feedback on the proposed airspace changes at Glasgow Prestwick Airport. Please see the below response to your feedback.

The priority for the replicated routes was to replicate the current routes as closely as possible which includes the consideration of established overflown populations. The route was tweaked in order to ease the overflight impact on the community of Drongan without trying to impact new populations and vary significantly from the existing route.

The main restriction of having an earlier flyover waypoint, and hence commencing the turn earlier, is the design principles which must be adhered to. The earliest place a flyover could be positioned is around the intersection of the far right circle and the centreline (shown on the below figure). This would unfortunately create a turn directly over Annbank before continuing over Belston or Hillhead. This would not be an improvement. The other restriction of making an earlier turn was the design ruling to retain the departures passing the HOLLI waypoint. This would not be achievable with an earlier turn.

The figure below shows the **current SID** and the **proposed**.



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Our Values: **Passion Professionalism Integrity Responsibility**

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Please let me know if you have any additional questions following the above. Thank you again for your continued support to this airspace change project.

Kind Regards

H.9 Reply to resident (13) – KA21



11 October 2017

Dear

First of all I would like to thank you for taking the time to write in with your feedback on the proposed airspace changes at Glasgow Prestwick Airport. Please see the below response to your feedback.

R30 Departure West

"At times the volume of arriving and departing aircraft is already very loud in Saltcoats never mind directly flying over the 3 towns!"

The proposed route for Runway 30 West departures will completely avoid the town of Saltcoats. Although the turn is about 450m further over the sea due to mandatory design criteria, it will have turned much further down than where Saltcoats is. The priority has been to position this turn over the sea in order to avoid Troon as much as possible.

R12 Departure West

"At times the volume of arriving and departing planes is loud enough without directly flying over the 3 towns."

The Runway 12 West departure route has been improved in order to minimise the impact on communities currently affected by low flights. As routes will be flown much more accurately with the increased navigational capability, we have purposely positioned routes to fly between communities and lessen the impact experienced today.

R12 Approach

"We already hear planes arriving and departing from Saltcoats to have them approach overhead is not acceptable just so they avoid Troon!"

As the Runway direction won't be changing, aircraft will still need to approach from the same direction in order to administer a safe final approach. We have therefore replicated the existing conventional approach for this Runway which already turns aircraft as far from the runway end with the limited airspace dimensions available to Glasgow Prestwick Airport.

Please let me know if you have any additional questions following the above. Thank you again for your continued support to this airspace change project.

Kind Regards

Manager Air Traffic Services

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H.10 Cargolux

Hello

Since I have been on this topic for a while, I will provide you the feedback from CLX that we can provide so far. This does however not exclude the possible comments on the arrival/approaches that we will be flying in our simulators.

In addition to the currently proposed new procedures we have some suggestions on what we would like to see developed, or at least get some background information on why they cannot happen.

- the new and old SIDs do not cater for North Atlantic departures, especially those to the north and north west which we generally use as we predominantly fly to the US west coast from PIK. Your airspace change document quite rightly states that our traffic is only a small percentage of the total traffic at PIK, but if we were able to save 1-2 minutes per north Atlantic departure we could save in the range of 500kg of fuel and that is quite significant. Hence we are proposing (not fully knowledgeable of the local airspace restrictions) a straight out departure on runway 30 that would keep the flight path over water. We could work with altitude restrictions to meet airspace limitations. If the concern is the exhaust noise pointed at the towns of Prestwick and Ayre, we would propose the 747-8 washout procedure. After takeoff the aircraft reduces the thrust quite considerably to lower the noise downstream. When the aircraft then has reached a certain height (i.e. when further away from the communities), thrust is again increased to climb to the cruise altitude.

The other advantage for NAT departures if such a published straight out departure would eliminate the guesswork for the estimate time of arrival at the oceanic entry point.

- while the consultation document explains that the airspace is limiting the altitude where the approach can be started (3500'), it is not entirely clear that the airspace limitations are due to terrain. I would guess so, but I cannot tell exactly from my charts (on the ILS 30 chart, the highest obstacle seems to be less than 2000'). If terrain is not the issue, could the bottom limit of the airspace be lowered to allow for the design of an RNAV approach with 3 degree descend angle? While we can fly 3.5 degree descend angles, it becomes more difficult at heavy weights and if a tailwind component is present on the approach.

Have you had any feedback from PIK concerning the covering of the database costs and could you propose new dates where NATS is available for simulator evaluation?

Thanks and best regards,

H.10.1 Cargolux reply

Hi

I'm writing in order to address Cargolux suggestions for Prestwick routes development. I would like to thank you for the feedback provided. These are very valid points and I hope that my responses below will be sufficient for you to understand the background for our decisions.

With regard to the first bullet and the suggestion for the North Atlantic departure being a straight ahead departure, it was an issue that was raised during the very initial workshop in this project. There was intention to design a route that would allow airlines to fly a more direct route, however the TRA 008C airspace literally got in the way. It was the ATC decision that no scheduled procedures can be designed to cross this TRA and the only solution was to define a detour. This detour could lead aircraft from the runway, following the left turn directly to TRN and then further on south of the TRA 008C. During the workshop it was decided that using existing point HERON rather than TRN would enable a slightly more direct route and a small shortcut to save some fuel and mileage. Outcome of those discussions was the proposed departure HERON 1K. At the moment, in the current airspace situation, we were unable to define any straight ahead departure. The only suggestion I could make at this stage is to see if maybe newly planned omnidirectional departures could serve you better in order to make the routes as short as possible. I understand though that they would not be so repetitive, and they would not allow such accurate ETA predictions.

With regard to the second bullet, I have to make it very clear that the scope of the current Airspace Change Proposal for Prestwick is related only to the instrument flight procedures, and only these are changed and implemented. No changes to the airspace structures are considered at the moment. Therefore, no terrain analysis with regard to the lower limits of any airspace structure were performed. As such, I cannot confirm the reason for airspace being at some points at 3500ft. The reasons for approaches being steeper than 3deg are related to two factors. Firstly, we were requested to replicate the current final approaches with as little changes as possible. Secondly, the terrain around Prestwick is a major factor. It might not affect some TMA structures, but it will affect the final approach descent gradients. I appreciate the difficulties heavy aircraft might have with a steep approach, and as a procedure designer I do know that the standard 3dgr is always a desired goal, but in case of Prestwick this was not feasible.

I do hope the above explanations are helpful. I am happy to answer any other questions or comments you or anyone at Cargolux could have.

Kind regards,



|

Consultant

|

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