


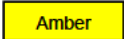

Safety and Airspace Regulation Group

Title of Airspace Change Proposal	Glasgow Prestwick Prestwick Airport RNAV Routes
Change Sponsor	Glasgow Prestwick Airport Ltd
SARG Project Leader	[REDACTED]
Case Study commencement date	
Case Study report as at	July 2018
File Reference	

Instructions

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

- Yes
- No
- Partially
- N/A

To aid the SARG Project Leader's efficient Project Management it may be useful that each question is also highlighted accordingly to illustrate what is: resolved  not resolved  not compliant  as part of the AR Project Leader's efficient project management.

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Airspace Change Proposal - Environmental Assessment

Version: 1.0/ 2016

1.	Introduction	
	<p>The number of available navigation aids in the UK, including some in the west of Scotland will reduce as a result of the NATS VOR Rationalisation Programme. The airport therefore requires to develop departure procedures which remove this dependency whilst at the same time seeking to provide improved navigational accuracy and efficiency. The airport are achieving this mainly through seeking to introduce new procedures based on PBN technology. The airport are using the opportunity to identify (and implement) more accurate and efficient ways of managing the airspace, for example; the proposed designs place the new flight paths as close as possible to those being used currently as the intention is that the same routes will be flown, using newer equipment to navigate. This change supports the UK Civil Aviation Authority's (CAA's) Future Airspace Strategy (or FAS). The intention is to replicate the existing current routes as closely as possible, while implementing the more modern design criteria, also taking the opportunity to future proof the airspace to ensure it will accommodate growth and development, while looking for improvements to the departure routes in terms of noise impact or environmental efficiency. These changes apply to all the different aviation services the airport operates (passenger, cargo military general aviation and executive).</p>	
2.	Guidance to the CAA	Status
2.1	Is the proposal consistent with Government policy and/or guidance from Government to the CAA?	Yes
	<p>Evidence supplied by the sponsor shows that the design complies with the Government Guidance: "Guidance to the Civil Aviation Authority on Environmental Objectives Relating to the Exercise of its Air Navigation Functions 2014. Old Navigation aids in the vicinity of Glasgow Prestwick airport are being removed as a result of a National programme of replacing ground based navigational aids that forms part of the Future Airspace Strategy for the UK and Ireland.</p>	
3.	Rationale for the Proposed Change	Status
3.1	Does the rationale for the ACP include environmental reasons?	Yes
	<p>The change is being carried out predominantly to ensure operations can continue at the airport and to support the Future Airspace Strategy for the UK and Ireland which aims to upgrade the airspace throughout UK and Ireland to increase capacity and efficiency while maintaining safety. The opportunity is being taken to future proof the airspace to ensure it will accommodate growth and development whilst also looking for improvements to the departure routes in terms of noise impact or environmental efficiency; for example departures that currently</p>	

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take aircraft to the Southeast and Southwest that do not work well for aircraft travelling to North America (in fuel efficiency terms), Northern Europe, or the far east as the aircraft have to fly away from their destination before turning back to the east or west.

4.	Nature of the Proposed Change	Status
4.1	<p>Is it clear how the proposed change will operate, and therefore what the likely environmental impacts will be?</p> <p>According to the Consultation document the sponsor's intention is to replicate the existing conventional routes as closely as possible. However, some changes are required to meet the more modern design criteria.</p>	Yes
4.2	<p>Have alternative options been considered, and have the environmental impact of each alternative been assessed?</p> <p>For each route a number of options have been evaluated; with environmental analysis completed for each set of alternatives considered including; minimising noise below 4,000ft, between 4000ft and 7,000 a balance between minimising noise and aircraft emissions. All routes were analysed for CO2, all routes produced an emissions disbenefit. The selected preferred routes providing the best balance to minimise noise impact, minimises environmental impact and maximises operational efficiency.</p>	Yes

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5.	Noise	Status
5.1	Has the noise impact been adequately assessed?	Yes
	For daytime noise the equivalent continuous sound level or Leq metric is used. This has been calculated for the busiest 16 hours of the day, between 07:00 and 2300 from the 16 June to 15 September. For the current route using the forecast traffic just after the proposed implementation date, and the proposed routes using the forecast for five years after the proposed implementation date.	
5.2	Has the noise impact been adequately presented in the consultation and the submitted proposal?	Yes
	Noise has been presented in terms of Leq contours calculated for the current routes using the forecast traffic just before the proposed implementation date the proposed new routes using the forecast traffic just after the proposed implementation date and the proposed new routes using the forecast for five years after the proposed implementation date. For night time noise the Sound Exposure Level (or SEL) metric is used.	

6.	Emissions	Status
6.1	Has the impact on CO₂ emissions been adequately assessed?	Yes
	CO ₂ emissions have been considered in terms of reducing track mileage wherever possible, in keeping with the government set priorities of minimising noise below 4,000ft. The overall effect of these considerations is that there is an increase in emissions of 23.2 tonnes fuel (or 73.9 tonnes CO ₂ over 6000 flights per year. The increase in track distances that has caused this increase is mainly associated with the updated design criteria that has been applied to the design.	
6.2	Has the impact on CO₂ emissions impact been adequately presented in the consultation and the submitted proposal?	Yes
	Track mileage, fuel burn and CO ₂ emissions differences were all presented for the preferred departure routes and the results presented in the consultation documents. In certain instances, the new required design criteria result in increases to fuel usage as a result of the initial turn point being further away from the runway than the current procedure.	

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7.	Local Air Quality	Status
7.1	Has the impact on Local Air Quality been adequately assessed?	N/A
	Government guidance requires that Local Air Quality only be a consideration if flight paths are proposed to be changed below 1000ft or where a breach of Air Quality Guidance limits is possible (these areas are designated as Air Quality Management Areas (or AQMA's). There are no AQMA's declared that could be impacted in the vicinity of Glasgow Prestwick Airport.	
7.2	Has the impact on Local Air Quality been adequately presented in the consultation and the submitted proposal?	Yes
	The proposal has no effect on traffic forecasts or flight paths below 1000ft, there will be no impact on flight paths below 1000ft therefore there will be no impact on local air quality and analysis is not required.	

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8.	Tranquillity	Status
8.1	Has the impact on tranquillity been adequately considered?	Yes
	The proposed routes do not overfly any National Parks or National Scenic Areas (NSAs). As such, no additional analysis into the tranquillity and visual intrusion of the proposed routes has been commissioned.	
8.2	Has the impact on tranquillity been adequately presented in the consultation and the submitted proposal?	Yes
	The proposed routes do not overfly any National Parks or National Scenic Areas (NSAs). As such, no additional analysis into the tranquillity and visual intrusion of the proposed routes has been commissioned.	
9.	Visual Intrusion	Status
9.1	Has the impact of visual intrusion been adequately considered?	Yes
	The proposed routes do not overfly any National Parks or National Scenic Areas (NSAs). As such, no additional analysis into the tranquillity and visual intrusion of the proposed routes has been commissioned.	
9.2	Has the impact of visual intrusion been adequately presented in the consultation and the submitted proposal?	Yes
	The proposed routes do not overfly any National Parks or National Scenic Areas (NSAs). As such, no additional analysis into the tranquillity and visual intrusion of the proposed routes has been commissioned.	
10.	Biodiversity	Status
10.1	Has the impact upon biodiversity been adequately considered?	Yes
	According to the consultation document and proposal the proposed routes do not overfly any National Parks or National Scenic areas, there are no impacts anticipated on flora, fauna, or biodiversity due to the proposed changes and therefore separate analysis has not been undertaken of these elements.	
10.2	Has the impact upon biodiversity been adequately presented in the consultation and the submitted proposal?	Yes

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According to the consultation document and proposal the proposed routes do not overfly any National Parks or National Scenic areas, there are no impacts anticipated on flora, fauna, or biodiversity due to the proposed changes.

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11.	Continuous Descent Approaches	Status
11.1	Has the implementation of, or greater use of, CDAs been considered?	Yes
	According to the consultation document, Introduction of RNAV1 arrival transitions will improve pilot descent planning capability and enhance the ability of IFR traffic to perform CDA's and LPLD. Increasing the efficiency of departure and arrival routes to Glasgow Prestwick airport such as through enabling CDAs is one of the stated objectives of the change.	
12.	Impacts Upon National Parks and/or AONBs	Status
12.1	Does the proposed change have an impact upon any National Parks or Areas of Outstanding Natural Beauty (AONBs)?	No
	An objective of the proposal is to minimise low level overflight of National Scenic Areas National Parks and other tranquil areas. This objective is achieved in that no National Parks or National Scenic areas are proposed to be overflowed. There are also no impact anticipated on flora, fauna or biodiversity due to the proposed changes.	
13.	Traffic Forecasts	Status
13.1	Have traffic forecasts been provided, are they reasonable, and have these been used to reflect the future impact of the proposal?	Yes
	Traffic forecasts are provided by aircraft number and type which for each route by week over the first 5 anticipated years of operation, the figures quoted do not include GA traffic. Forecasts are provided for 2019 (24%~) traffic increase, 2020 (8% increase) 2021 (3%) and 2022 (2%) and 2023 (3%)	
14.	Consultation	Status
14.1	If undertaken, has evidence of non-aviation stakeholder consultation been provided?	Yes
	Evidence provided of General aviation stakeholder consultation, in addition to enroute airspace consultation and a project timeline that included allowance for public consultation.	

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14.2	Has account been taken of the results of the environmental factors raised by consultees or has evidence been provided to indicate why this has not been possible?	Yes
	According to the Consultation feedback report, 18 survey feedback responses received during the consultation (that included feedback from residents) has been reviewed and considered as part of the process to finalise technical designs. The vast majority of this feedback was at least in part positive. A single response being recorded as opposed to the proposals on the basis of noise. No detail is provided regarding the response made to this objection.	

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15.	Compliance with CAP 725	Status
15.1	Have all environmental assessment requirements specified in CAP 725 been met, where applicable?	Yes

16.	Other Aspects	Status
16.1	Are there any other aspects of the ACP, that have not already been addressed in this report, that may have a bearing on the environmental impact?	No

17.	Recommendations	Status
17.1	Are there any recommendations for the Post-Implementation Review?	Yes
	Performance of flights using the new procedures should be monitored over the first 12 months of operation in order to establish that the anticipated safety benefits are being gained and establish the magnitude of any changes to fuel burn and related emissions.	

18.	Government Approval	Status
18.1	Is the approval of the Secretary of State for Transport required in respect of the environmental impact of the airspace change proposal?	No

19.	Conclusions	
19.1	Can an overall environmental benefit be demonstrated (or justified/supported)?	No

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No, this is acceptable as this proposal's main objective is to replicate the existing departure procedures, and make the airspace management more accurate and efficient, while doing this, to future proof the airspace, moving over to using new procedures with new technology, in line with the UK wide airspace change programme of the navigation aids being removed.

Outstanding Issues

Serial	Issue	Action Required
1		
2		

Additional Compliance Requirements (to be satisfied by Change Sponsor)

Serial	Requirement
1	
2	

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Environmental Assessment Sign-off/Approval	Name	Signature	Date
Environmental Assessment completed by:	[REDACTED]	[REDACTED]	08/11/2018
Environmental Assessment approved by:	[REDACTED]	[REDACTED]	16/11/2018